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# Sequence Listing

Ashkenazi, Avi J.  
Baker, Kevin P.  
Botstein, David  
Desnoyers, Luc  
Eaton, Dan L.  
Ferrara, Napoleone  
Fong, Sherman  
Gerber, Hanspeter  
Gerritsen, Mary E.  
Goddard, Audrey  
Godowski, Paul J.  
Grimaldi, J. Christopher  
Gurney, Austin L.  
Kljavin, Ivar J.  
Napier, Mary A.  
Pan, James  
Paoni, Nicholas F.  
Roy, Margaret Ann  
Stewart, Timothy A.  
Tumas, Daniel  
Watanabe, Colin K.  
Williams, P. Mickey  
Wood, William I.  
Zhang, Zemin

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Phe	Leu	Tyr	Arg	Phe	Gln	Ile	Trp	Arg	Pro	Ile	Thr	Ala	Thr	Phe	50	55	60	
Tyr	Phe	Pro	Val	Gly	Pro	Gly	Thr	Gly	Phe	Leu	Tyr	Leu	Val	Asn	65	70	75	
Leu	Tyr	Phe	Leu	Tyr	Gln	Tyr	Ser	Thr	Arg	Leu	Glu	Thr	Gly	Ala	80	85	90	
Phe	Asp	Gly	Arg	Pro	Ala	Asp	Tyr	Leu	Phe	Met	Leu	Leu	Phe	Asn	95	100	105	
Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu	110	115	120	
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln	125	130	135	
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe	140	145	150	
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile	155	160	165	
Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly	170	175	180	
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly	185	190	195	
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu	200	205	210	
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala	215	220	225	
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His	230	235	240	
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<211> 1373

<212> DNA

<213> Homo sapiens

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Asp	Phe	Val	Glu	Gln	Lys	Cys	Glu	Val	Asn	Cys	Lys	Gly	Gly	His	
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Val	Ile	Thr	Pro	Gly	Ser	Pro	Glu	Pro	Val	Ile	Leu	Val	Ala	Cys	
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Val	Pro	Leu	Val	Phe	Asp	Asp	Glu	Glu	Glu	Ser	Lys	Leu	Thr	Tyr	
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Thr	Glu	Ile	His	Gln	Glu	Tyr	Lys	Glu	Leu	Val	Glu	Lys	Leu	Leu	
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Glu	Gly	Tyr	Leu	Lys	Glu	Ile	Gly	Ile	Asn	Glu	Asp	Gln	Phe	Gln	
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Glu	Ala	Cys	Thr	Ser	Pro	Leu	Ala	Lys	Thr	His	Thr	Ser	Gln	Ala	
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Ile	Leu	Gln	Pro	Val	Leu	Ala	Ala	Glu	Asp	Phe	Thr	Ile	Phe	Lys	
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Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	
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Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	
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Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	
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Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	
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Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	
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Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	
				260					265					270	
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	
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Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met
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Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr
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Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu
				335					340					345
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu
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Lys	Glu	Glu	Val	Ile	Asn	Lys								
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<210> 11  
 <211> 23  
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 35 40 45  
 Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu  
 50 55 60  
 Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys  
 65 70 75  
 Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu  
 80 85 90  
 Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe  
 95 100 105  
 Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro  
 110 115 120  
 Ala Met Ala Val Ile Phe Ser Asn Phe Ser Ile Ile Thr Thr Ala  
 125 130 135  
 Leu Leu Phe Arg Ile Val Leu Lys Arg Arg Leu Asn Trp Ile Gln  
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His	His	Asp	Ala	Phe	Phe	Ser	Pro	Ser	Asn	Ser	Cys	Leu	Leu	Phe	
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Arg	Ser	Glu	Cys	Pro	Arg	Lys	Asp	Asn	Cys	Thr	Ala	Lys	Glu	Trp	
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Thr	Phe	Pro	Glu	Ala	Lys	Trp	Asn	Thr	Thr	Ala	Arg	Val	Phe	Ser	
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His	Ile	Arg	Leu	Gly	Met	Gly	His	Val	Leu	Ile	Ile	Val	Gln	Cys	
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<212> DNA  
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<210> 16  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 16  
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<210> 17  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 17  
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<210> 18  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 18  
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<210> 19  
<211> 2142  
<212> DNA  
<213> Homo sapiens

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<210> 20

<211> 458

<212> PRT

<213> Homo sapiens

<400> 20

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Trp	Ala	Glu	Pro	Gly	Met	Pro	Ser	Gln	Thr	Pro	Trp	Trp	Ala	Ser
				20					25					30

Ala	Ser	Ala	Asn	Pro	Pro	Gly	Pro	Ala	Trp	Val	Ala	Leu	Cys	Pro
				35					40					45



Gly	Ser	Ser	Ser	Pro	Arg	Pro	Trp	Pro	Ser	Leu	Pro	Thr	Ser	Ser		50	55	60
Ser	Gly	Ser	Cys	Pro	Thr	Ser	His	Thr	Ala	Arg	Pro	Ile	Gly	Thr		65	70	75
Cys	Phe	Ser	Ile	Ala	Ser	Leu	Lys	Gln	Trp	Ser	Arg	Val	Ser	Met		80	85	90
Phe	Pro	Thr	Arg	Leu	Ser	Pro	Cys	Ser	Ser	Ala	Thr	Glu	Gln	Thr		95	100	105
Glu	Arg	Asp	Ser	Ala	Thr	Ala	Tyr	Arg	Met	Thr	Val	Glu	Val	Leu		110	115	120
Gly	Thr	Val	Leu	Gly	Thr	Ala	Ile	Gln	Gly	Gln	Ile	Val	Gly	Gln		125	130	135
Ala	Asp	Thr	Pro	Cys	Phe	Gln	Asp	Phe	Asn	Ser	Ser	Thr	Val	Ala		140	145	150
Ser	Gln	Ser	Ala	Asn	His	Thr	His	Gly	Thr	Thr	Ser	His	Arg	Glu		155	160	165
Thr	Gln	Lys	Ala	Tyr	Leu	Leu	Ala	Ala	Gly	Val	Ile	Val	Cys	Ile		170	175	180
Tyr	Ile	Ile	Cys	Ala	Val	Ile	Leu	Ile	Leu	Gly	Val	Arg	Glu	Gln		185	190	195
Arg	Glu	Pro	Tyr	Glu	Ala	Gln	Gln	Ser	Glu	Pro	Ile	Ala	Tyr	Phe		200	205	210
Arg	Gly	Leu	Arg	Leu	Val	Met	Ser	His	Gly	Pro	Tyr	Ile	Lys	Leu		215	220	225
Ile	Thr	Gly	Phe	Leu	Phe	Thr	Ser	Leu	Ala	Phe	Met	Leu	Val	Glu		230	235	240
Gly	Asn	Phe	Val	Leu	Phe	Cys	Thr	Tyr	Thr	Leu	Gly	Phe	Arg	Asn		245	250	255
Glu	Phe	Gln	Asn	Leu	Leu	Leu	Ala	Ile	Met	Leu	Ser	Ala	Thr	Leu		260	265	270
Thr	Ile	Pro	Ile	Trp	Gln	Trp	Phe	Leu	Thr	Arg	Phe	Gly	Lys	Lys		275	280	285
Thr	Ala	Val	Tyr	Val	Gly	Ile	Ser	Ser	Ala	Val	Pro	Phe	Leu	Ile		290	295	300
Leu	Val	Ala	Leu	Met	Glu	Ser	Asn	Leu	Ile	Ile	Thr	Tyr	Ala	Val		305	310	315
Ala	Val	Ala	Ala	Gly	Ile	Ser	Val	Ala	Ala	Ala	Phe	Leu	Leu	Pro		320	325	330
Trp	Ser	Met	Leu	Pro	Asp	Val	Ile	Asp	Asp	Phe	His	Leu	Lys	Gln				

335	340	345
Pro His Phe His Gly Thr Glu Pro Ile Phe Phe Ser Phe Tyr Val		
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Phe Phe Thr Lys Phe Ala Ser Gly Val Ser Leu Gly Ile Ser Thr		
365	370	375
Leu Ser Leu Asp Phe Ala Gly Tyr Gln Thr Arg Gly Cys Ser Gln		
380	385	390
Pro Glu Arg Val Lys Phe Thr Leu Asn Met Leu Val Thr Met Ala		
395	400	405
Pro Ile Val Leu Ile Leu Leu Gly Leu Leu Leu Phe Lys Met Tyr		
410	415	420
Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln		
425	430	435
Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp		
440	445	450
Ser Thr Glu Leu Ala Ser Ile Leu		
455		

<210> 21  
 <211> 571  
 <212> DNA  
 <213> Homo sapiens

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 accctatgaa gccagcagc ctgagccaat cgcctacttc cggggcctac 150  
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 ttcacctcct tggctttcat gctgggtggag gggaactttg tcttggtttg 250  
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 cggtttgga agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400  
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 cggtagctgt ggcagctggc atcagtgtgg cagctgcctt cttactacce 500  
 tggccatgc tgctgatgt cattgacgac ttccatctga agcagcccca 550  
 cttccatgga accgagccca t 571

<210> 22  
 <211> 1173

<212> DNA  
<213> Homo sapiens

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aaacagaaaa cctgttagaa atgtggtggg ttcagcaagg cctcagtttc 150  
cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200  
cattactgca gtaacactcc accatataga cccggcttta ccttatatca 250  
gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300  
aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350  
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400  
ctggccttgt acttgaata ctgagttggt taggactttc tattgtggca 450  
aacttccaga aaacaacct ttttgctgca catgtaagtg gagctgtgct 500  
tacctttggg atgggctcat tatatatgtt tgttcagacc atcctttcct 550  
accaaagca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600  
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ctactttcca gagatatttg atgaaaggat aaaatatttc tgtaatgatt 950  
atgattctca gggattgggg aaaggttcac agaagttgct tattcttctc 1000  
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gaaaataaag tcaaaagact atg 1173

<210> 23  
<211> 266  
<212> PRT  
<213> Homo sapiens

<400> 23

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Val	Thr	Leu	His	His	Ile	Asp	Pro	Ala	Leu	Pro	Tyr	Ile	Ser	Asp	35	40	45	
Thr	Gly	Thr	Val	Ala	Pro	Glu	Lys	Cys	Leu	Phe	Gly	Ala	Met	Leu	50	55	60	
Asn	Ile	Ala	Ala	Val	Leu	Cys	Ile	Ala	Thr	Ile	Tyr	Val	Arg	Tyr	65	70	75	
Lys	Gln	Val	His	Ala	Leu	Ser	Pro	Glu	Glu	Asn	Val	Ile	Ile	Lys	80	85	90	
Leu	Asn	Lys	Ala	Gly	Leu	Val	Leu	Gly	Ile	Leu	Ser	Cys	Leu	Gly	95	100	105	
Leu	Ser	Ile	Val	Ala	Asn	Phe	Gln	Lys	Thr	Thr	Leu	Phe	Ala	Ala	110	115	120	
His	Val	Ser	Gly	Ala	Val	Leu	Thr	Phe	Gly	Met	Gly	Ser	Leu	Tyr	125	130	135	
Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile	140	145	150	
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp	155	160	165	
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu	170	175	180	
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp	185	190	195	
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala	200	205	210	
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr	215	220	225	
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn	230	235	240	
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn	245	250	255	
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 <212> DNA  
 <213> Homo sapiens

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<221> unsure  
<222> 14, 484  
<223> unknown base

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gagcggagat cctcaaacgg cctagtgcct cgcgcttcgc gagaaaatca 150  
gcgggtctaataaattcctct ggtttgttga agcagttacc aagaatcttc 200  
aacccctttcc cacaaaagct aattgagtag acgttctctgt tgagtacacg 250  
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gcaaggcctc agtttcttc cttcagccct tgtaatttgg acatctgctg 400  
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gctttacctt atatcagtag cactggtaca gtanc 485

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<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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<210> 26  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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<210> 27  
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<212> DNA  
<213> Homo sapiens

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<210> 28  
 <211> 264  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 28

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Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	20	25	30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	35	40	45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	50	55	60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	65	70	75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	80	85	90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	95	100	105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	110	115	120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	125	130	135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	140	145	150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	155	160	165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	170	175	180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	185	190	195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	200	205	210	
Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu	215	220	225	
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys	230	235	240	
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala	245	250	255	
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<210> 29  
 <211> 1292  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
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 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150  
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200  
 tcagagactg ttgatttggt gagacagacc ggccatcagt gtggcatgtc 250  
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300  
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 ctcgcaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400  
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 accctttcca gactttgacc cctggtggac aaacgactgt gagcagaatg 600  
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 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000  
 cctatttata attggcagcg gtgaggccat gttgcagctc atccctccct 1050  
 tccagtgccg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100  
 gatatcggct atgtcgacac caccactgg aaggtctacg ttatagccag 1150  
 aggggtccag ccttttgtca tctgcgatgg aaccgctttc tcagaactgt 1200  
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccagggt 1250  
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30  
 <211> 347  
 <212> PRT  
 <213> Homo sapiens



<400> 30

Met	Asp	Leu	Ala	Ala	Asn	Glu	Ile	Ser	Ile	Tyr	Asp	Lys	Leu	Ser	1	5	10	15
Glu	Thr	Val	Asp	Leu	Val	Arg	Gln	Thr	Gly	His	Gln	Cys	Gly	Met	20	25	30	
Ser	Glu	Lys	Ala	Ile	Glu	Lys	Phe	Ile	Arg	Gln	Leu	Leu	Glu	Lys	35	40	45	
Asn	Glu	Pro	Gln	Arg	Pro	Pro	Pro	Gln	Tyr	Pro	Leu	Leu	Ile	Val	50	55	60	
Val	Tyr	Lys	Val	Leu	Ala	Thr	Leu	Gly	Leu	Ile	Leu	Leu	Thr	Ala	65	70	75	
Tyr	Phe	Val	Ile	Gln	Pro	Phe	Ser	Pro	Leu	Ala	Pro	Glu	Pro	Val	80	85	90	
Leu	Ser	Gly	Ala	His	Thr	Trp	Arg	Ser	Leu	Ile	His	His	Ile	Arg	95	100	105	
Leu	Met	Ser	Leu	Pro	Ile	Ala	Lys	Lys	Tyr	Met	Ser	Glu	Asn	Lys	110	115	120	
Gly	Val	Pro	Leu	His	Gly	Gly	Asp	Glu	Asp	Arg	Pro	Phe	Pro	Asp	125	130	135	
Phe	Asp	Pro	Trp	Trp	Thr	Asn	Asp	Cys	Glu	Gln	Asn	Glu	Ser	Glu	140	145	150	
Pro	Ile	Pro	Ala	Asn	Cys	Thr	Gly	Cys	Ala	Gln	Lys	His	Leu	Lys	155	160	165	
Val	Met	Leu	Leu	Glu	Asp	Ala	Pro	Arg	Lys	Phe	Glu	Arg	Leu	His	170	175	180	
Pro	Leu	Val	Ile	Lys	Thr	Gly	Lys	Pro	Leu	Leu	Glu	Glu	Glu	Ile	185	190	195	
Gln	His	Phe	Leu	Cys	Gln	Tyr	Pro	Glu	Ala	Thr	Glu	Gly	Phe	Ser	200	205	210	
Glu	Gly	Phe	Phe	Ala	Lys	Trp	Trp	Arg	Cys	Phe	Pro	Glu	Arg	Trp	215	220	225	
Phe	Pro	Phe	Pro	Tyr	Pro	Trp	Arg	Arg	Pro	Leu	Asn	Arg	Ser	Gln	230	235	240	
Met	Leu	Arg	Glu	Leu	Phe	Pro	Val	Phe	Thr	His	Leu	Pro	Phe	Pro	245	250	255	
Lys	Asp	Ala	Ser	Leu	Asn	Lys	Cys	Ser	Phe	Leu	His	Pro	Glu	Pro	260	265	270	
Val	Val	Gly	Ser	Lys	Met	His	Lys	Met	Pro	Asp	Leu	Phe	Ile	Ile	275	280	285	

Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys
				290					295					300
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp
				305					310					315
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala
				320					325					330
Arg	Gly	Val	Gln	Pro	Leu	Val	Ile	Cys	Asp	Gly	Thr	Ala	Phe	Ser
				335					340					345

Glu Leu

<210> 31  
 <211> 478  
 <212> DNA  
 <213> Homo sapiens

<400> 31  
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 gcccgagggg cgcgagcccc gcatgaatca ttgtagtcaa tcattttcca 100  
 gttctcagcc gttcagttgt gatcaaggga cacgtgggtt ccgaactgcc 150  
 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200  
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250  
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300  
 aaaatttata agacagctgc tggaaaagaa tgaacctcag agaccccccc 350  
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttgga 400  
 ttaatcttgc tcaactgccta ctttgtgatt caacctttca gcccattagc 450  
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<210> 32  
 <211> 3531  
 <212> DNA  
 <213> Homo sapiens

<400> 32  
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 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150  
 tgccatagag ccgctggggc tgcagtgggg actgccctcc ctgccaccca 200  
 ccaatggcag cccaccttc tttgaagact tccaggcttt ttgtgccaca 250  
 cccgaatggc gccacttcac cgacaaacag gtacagccaa ccatgtccca 300

gttcgaaatg gacacgtatg ctaagagcca cgaccttatg tcaggtttct 350  
 ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcgccagtgg 400  
 gagcgcgccc agagtgcgag ggccttccag gagctggtgc tggaacctgc 450  
 gcagaggcgg gcgcgcctgg aggggctacg ctacacggca gtgctgaagc 500  
 agcaggcaac gcagcactcc atggccctgc tgcactgggg ggcgctgtgg 550  
 cgccagctcg ccagcccatg tggggcctgg gcgctgaggg aactcccat 600  
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 catcccaccc catacccagg tacggaacca ggtgtactcg tggctcctgc 1250  
 gcctacggcc cccctctcaa ggctacctaa gcagccgctc ccccaggag 1300  
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 atgacctgtc tcagtacct gtgttccct gggctctgca ggactacgtg 1450  
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 gcccatcggt gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550  
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 acgagaaggt aggcgatgtg gtgctacccc cgtgggccag ctctcctgag 1900  
 gacttcatcc agcagcaccg ccaggctctg gagtcggagt atgtgtctgc 1950  
 acacctacac gagtggatcg acctcatctt tggctacaag cagcgggggc 2000  
 cagccgccga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050  
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 ctggacacta actcacctag catcttccag cacctggacg aactcaaggc 2250  
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 gctggttgcc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350  
 gacccacca tgggcagcca caagacgcag cgactgctga gtggcccgtg 2400  
 ggtgccaggc agtgggtgtg gtggacaagc actggcagtg gccccgatg 2450  
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 gcactacccc gtggcaagct gttgagccag ctgagctgcc accttgatgt 2550  
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 gatctgagga tggaaactgtg atcatacaca ctgtacgccg cggacagttt 2800  
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 aacgtcctgg gggccaggtc acctactcct tgcacctgta ttcagtcaat 2950  
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 ggtgacagag gactttgtgt tgctgggcac cgcccagtgc gccctgcaca 3050  
 tcctccaact aaacacactg ctcccggccg cgctccctt gcccatgaag 3100  
 gtggccatcc gcagcgtggc cgtgaccaag gagcgcagcc acgtgctggt 3150  
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aggtgcgag cagccagttc gcgcggaagc tgtggcggtc ctgcggcgc 3250  
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 ctgaacctgg ccagtccggc tgctcggggc ccgcccccg caggcctggc 3350  
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 cagggggtga gcggggcca ccctgccag ctccaggatt ggcggcgat 3450  
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 ggggcgccc tgaggccag cactggcgtc t 3531

<210> 33  
 <211> 1003  
 <212> PRT  
 <213> Homo sapiens

<400> 33  
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 1 5 10 15  
 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser  
 20 25 30  
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe  
 35 40 45  
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu  
 50 55 60  
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His  
 65 70 75  
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala  
 80 85 90  
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg  
 95 100 105  
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys  
 110 115 120  
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala  
 125 130 135  
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu  
 140 145 150  
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr  
 155 160 165  
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu  
 170 175 180  
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln  
 185 190 195

Arg	Glu	Lys	Leu	Val	Leu	Ser	Ala	Glu	Cys	Gln	Leu	Val	Thr	Val		
				200					205					210		
Val	Ala	Val	Val	Pro	Gly	Leu	Leu	Glu	Val	Thr	Thr	Gln	Asn	Val		
				215					220					225		
Tyr	Phe	Tyr	Asp	Gly	Ser	Thr	Glu	Arg	Val	Glu	Thr	Glu	Glu	Gly		
				230					235					240		
Ile	Gly	Tyr	Asp	Phe	Arg	Arg	Pro	Leu	Ala	Gln	Leu	Arg	Glu	Val		
				245					250					255		
His	Leu	Arg	Arg	Phe	Asn	Leu	Arg	Arg	Ser	Ala	Leu	Glu	Leu	Phe		
				260					265					270		
Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val		
				275					280					285		
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln		
				290					295					300		
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr		
				305					310					315		
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser		
				320					325					330		
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln		
				335					340					345		
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln		
				350					355					360		
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr		
				365					370					375		
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu		
				380					385					390		
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile		
				395					400					405		
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr		
				410					415					420		
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr		
				425					430					435		
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile		
				440					445					450		
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly		
				455					460					465		
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala		
				470					475					480		
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile		

	485		490		495
Pro Glu Phe Phe Tyr Phe Pro Asp Phe	500	Leu Glu Asn Gln Asn Gly	505		510
Phe Asp Leu Gly Cys Leu Gln Leu Thr	515	Asn Glu Lys Val Gly Asp	520		525
Val Val Leu Pro Pro Trp Ala Ser Ser	530	Pro Glu Asp Phe Ile Gln	535		540
Gln His Arg Gln Ala Leu Glu Ser Glu	545	Tyr Val Ser Ala His Leu	550		555
His Glu Trp Ile Asp Leu Ile Phe Gly	560	Tyr Lys Gln Arg Gly Pro	565		570
Ala Ala Glu Glu Ala Leu Asn Val Phe	575	Tyr Tyr Cys Thr Tyr Glu	580		585
Gly Ala Val Asp Leu Asp His Val Thr	590	Asp Glu Arg Glu Arg Lys	595		600
Ala Leu Glu Gly Ile Ile Ser Asn Phe	605	Gly Gln Thr Pro Cys Gln	610		615
Leu Leu Lys Glu Pro His Pro Thr Arg	620	Leu Ser Ala Glu Glu Ala	625		630
Ala His Arg Leu Ala Arg Leu Asp Thr	635	Asn Ser Pro Ser Ile Phe	640		645
Gln His Leu Asp Glu Leu Lys Ala Phe	650	Phe Ala Glu Val Thr Val	655		660
Ser Ala Ser Gly Leu Leu Gly Thr His	665	Ser Trp Leu Pro Tyr Asp	670		675
Arg Asn Ile Ser Asn Tyr Phe Ser Phe	680	Ser Lys Asp Pro Thr Met	685		690
Gly Ser His Lys Thr Gln Arg Leu Leu	695	Ser Gly Pro Trp Val Pro	700		705
Gly Ser Gly Val Ser Gly Gln Ala Leu	710	Ala Val Ala Pro Asp Gly	715		720
Lys Leu Leu Phe Ser Gly Gly His Trp	725	Asp Gly Ser Leu Arg Val	730		735
Thr Ala Leu Pro Arg Gly Lys Leu Leu	740	Ser Gln Leu Ser Cys His	745		750
Leu Asp Val Val Thr Cys Leu Ala Leu	755	Asp Thr Cys Gly Ile Tyr	760		765
Leu Ile Ser Gly Ser Arg Asp Thr Thr	770	Cys Met Val Trp Arg Leu	775		780

Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	
Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln	
				905					910					915	
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala	
				920					925					930	
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr	
				935					940					945	
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu	
				950					955					960	
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln	
				965					970					975	
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val	
				980					985					990	
Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg			
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<210> 34

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35

<211> 1395



<212> DNA  
<213> Homo sapiens

<400> 35  
cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50  
atcatgcaac ccacaggccc accttgtgaa ctctcgtgc ccagggctga 100  
tgtgcgctctt ccagggtctac tcatccaaag gcctaatacca acgttctgtc 150  
ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200  
ggtactggcc ctgggccaat gcgtcctcgc tggagccttt gcctccttct 250  
actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300  
gccttcatcc gcacactccg ttaccacact gggtcattgg catttgagc 350  
cctcatcctg accttctgtc agatagcccg ggtcatcttg gagtatattg 400  
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tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500  
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agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950  
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gaggcaggag aatcgcttga acccgaggag cagagggtgc agtgagccga 1300  
gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350



Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe
				260					265					270
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu
				275					280					285
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys
				290					295					300
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp
				305					310					315
Asn	Lys	Lys	Arg	Lys	Lys									
				320										

<210> 37  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 37  
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<210> 38  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 38  
 gtctttaccc agccccggga tgcg 24

<210> 39  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 39  
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<210> 40  
 <211> 1365  
 <212> DNA  
 <213> Homo sapiens

<400> 40  
 gagtcttgac cgccgcccggg ctcttggtac ctcagcgcgga gcgccaggcg 50  
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aggtggtcca gagccagagg gtccttctct tcgtggcctc ggacgtggat 150  
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<210> 41  
 <211> 566  
 <212> PRT  
 <213> Homo sapiens

<400> 41

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Cys	Ala	Cys	Lys	Ile	Leu	Gln	Ala	Leu	Phe	Gln	Cys	Asp	His	Val	35	40	45	
Gln	Tyr	Thr	Leu	Val	Pro	Val	Ser	Gly	Trp	Gln	Glu	Leu	Glu	Thr	50	55	60	
Ala	Phe	Leu	Glu	His	Lys	Glu	Gln	Phe	His	Tyr	Phe	Ile	Leu	Ile	65	70	75	
Asn	Cys	Gly	Ala	Asn	Val	Asp	Leu	Leu	Asp	Ile	Leu	Gln	Pro	Asp	80	85	90	
Glu	Asp	Thr	Ile	Phe	Phe	Val	Cys	Asp	Ser	His	Arg	Pro	Val	Asn	95	100	105	
Val	Val	Asn	Val	Tyr	Asn	Asp	Thr	Gln	Ile	Lys	Leu	Leu	Ile	Lys	110	115	120	
Gln	Asp	Asp	Asp	Leu	Glu	Val	Pro	Ala	Tyr	Glu	Asp	Ile	Phe	Arg	125	130	135	
Asp	Glu	Glu	Glu	Asp	Glu	Glu	His	Ser	Gly	Asn	Asp	Ser	Asp	Gly	140	145	150	
Ser	Glu	Pro	Ser	Glu	Lys	Arg	Thr	Arg	Leu	Glu	Glu	Glu	Ile	Val	155	160	165	
Glu	Gln	Thr	Met	Arg	Arg	Arg	Gln	Arg	Arg	Glu	Trp	Glu	Ala	Arg	170	175	180	
Arg	Arg	Asp	Ile	Leu	Phe	Asp	Tyr	Glu	Gln	Tyr	Glu	Tyr	His	Gly	185	190	195	
Thr	Ser	Ser	Ala	Met	Val	Met	Phe	Glu	Leu	Ala	Trp	Met	Leu	Ser	200	205	210	
Lys	Asp	Leu	Asn	Asp	Met	Leu	Trp	Trp	Ala	Ile	Val	Gly	Leu	Thr	215	220	225	
Asp	Gln	Trp	Val	Gln	Asp	Lys	Ile	Thr	Gln	Met	Lys	Tyr	Val	Thr	230	235	240	
Asp	Val	Gly	Val	Leu	Gln	Arg	His	Val	Ser	Arg	His	Asn	His	Arg	245	250	255	
Asn	Glu	Asp	Glu	Glu	Asn	Thr	Leu	Ser	Val	Asp	Cys	Thr	Arg	Ile	260	265	270	
Ser	Phe	Glu	Tyr	Asp	Leu	Arg	Leu	Val	Leu	Tyr	Gln	His	Trp	Ser	275	280	285	
Leu	His	Asp	Ser	Leu	Cys	Asn	Thr	Ser	Tyr	Thr	Ala	Ala	Arg	Phe				

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Lys Leu Trp Ser	Val His Gly Gln Lys	Arg Leu Gln Glu Phe Leu			
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Ala Asp Met Gly	Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe Gln			
	320	325			330
Ala Met Asp Ile	Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile Glu			
	335	340			345
Glu Ser Ala Asn	Lys Phe Gly Met Lys	Asp Met Arg Val Gln Thr			
	350	355			360
Phe Ser Ile His	Phe Gly Phe Lys His	Lys Phe Leu Ala Ser Asp			
	365	370			375
Val Val Phe Ala	Thr Met Ser Leu Met	Glu Ser Pro Glu Lys Asp			
	380	385			390
Gly Ser Gly Thr	Asp His Phe Ile Gln	Ala Leu Asp Ser Leu Ser			
	395	400			405
Arg Ser Asn Leu	Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala Lys			
	410	415			420
Lys Gln Leu Arg	Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu Cys			
	425	430			435
Thr Asn Leu Val	Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser Leu			
	440	445			450
Met Glu Gly Thr	Pro Asp Val Met Leu	Phe Ser Arg Pro Ala Ser			
	455	460			465
Leu Ser Leu Leu	Ser Lys His Leu Leu	Lys Ser Phe Val Cys Ser			
	470	475			480
Thr Lys Asn Arg	Arg Cys Lys Leu Leu	Pro Leu Val Met Ala Ala			
	485	490			495
Pro Leu Ser Met	Glu His Gly Thr Val	Thr Val Val Gly Ile Pro			
	500	505			510
Pro Glu Thr Asp	Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg Ala			
	515	520			525
Phe Glu Lys Ala	Ala Glu Ser Thr Ser	Ser Arg Met Leu His Asn			
	530	535			540
His Phe Asp Leu	Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg Ser			
	545	550			555
Lys Phe Leu Asp	Ala Leu Ile Ser Leu	Leu Ser			
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<212> DNA  
 <213> Homo sapiens  
  
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 <221> unsure  
 <222> 44, 118, 172, 183  
 <223> unknown base  
  
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 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150  
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 <223> Synthetic oligonucleotide probe  
  
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 <210> 44  
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 <210> 45  
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 <223> Synthetic oligonucleotide probe  
  
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<210> 46  
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 <212> DNA  
 <213> Homo sapiens

<400> 46  
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 aggaacgaaa agagacagtt ttttttggaa agctaagtct tccctttatc 200  
 gagtcaagaa accccccctt cttgagctat ttacagcttt taacaattga 250  
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<210> 47  
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 <212> PRT  
 <213> Homo sapiens

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 <222> 1-20  
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<220>  
 <221> N-glycosylation Site  
 <222> 72-75  
 <223> N-glycosylation Site

<220>  
 <221> Clq Domain Proteins  
 <222> 144-178, 78-111, 84-117  
 <223> Clq Domain Proteins

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                   20                  25                  30  
 Arg Ala Val Ala Ser Gly Cys Gln Arg Cys Cys Asp Ser Glu Asp  
                   35                  40                  45  
 Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg  
                   50                  55                  60  
 Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile  
                   65                  70                  75  
 Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly  
                   80                  85                  90  
 Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly  
                   95                  100                  105  
 Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys  
                   110                  115                  120

Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu	
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His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Leu	Phe	Glu	Arg	Val	Phe	
				140					145					150	
Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala	
				155					160					165	
Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser	
				170					175					180	
Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys	
				185					190					195	
Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met	
				200					205					210	
Gln	Ser	Gln	Ser	Val	Met	Leu	Asp	Leu	Ala	Tyr	Gly	Asp	Arg	Val	
				215					220					225	
Trp	Val	Arg	Leu	Phe	Lys	Arg	Gln	Arg	Glu	Asn	Ala	Ile	Tyr	Ser	
				230					235					240	
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<210> 48  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 48  
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<210> 49  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 49  
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<210> 50  
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<223> Synthetic oligonucleotide probe

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<210> 51  
<211> 2768  
<212> DNA  
<213> Homo sapiens

<400> 51  
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ccgcctcccg ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150  
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<210> 52  
 <211> 673  
 <212> PRT  
 <213> Homo sapiens

<400> 52  
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 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr  
 35 40 45  
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe  
 50 55 60  
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu  
 65 70 75  
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser  
 80 85 90  
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu  
 95 100 105  
 Asp Leu Thr Ala Asn Arg Leu His Glu Ile Thr Asn Glu Thr Phe  
 110 115 120  
 Arg Gly Leu Arg Arg Leu Glu Arg Leu Tyr Leu Gly Lys Asn Arg  
 125 130 135  
 Ile Arg His Ile Gln Pro Gly Ala Phe Asp Thr Leu Asp Arg Leu  
 140 145 150  
 Leu Glu Leu Lys Leu Gln Asp Asn Glu Leu Arg Ala Leu Pro Pro  
 155 160 165  
 Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser  
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 Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu  
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 Ala Leu Arg Leu Ala Gly Leu Gly Leu Gln Gln Leu Asp Glu Gly  
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 Asn Gln Leu Glu Arg Val Pro Pro Val Ile Arg Gly Leu Arg Gly

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Arg	Pro	Glu	Asp	Leu	Ala	Gly	Leu	Ala	Ala	Leu	Gln	Glu	Leu	Asp	
				260					265					270	
Val	Ser	Asn	Leu	Ser	Leu	Gln	Ala	Leu	Pro	Gly	Asp	Leu	Ser	Gly	
				275					280					285	
Leu	Phe	Pro	Arg	Leu	Arg	Leu	Leu	Ala	Ala	Ala	Arg	Asn	Pro	Phe	
				290					295					300	
Asn	Cys	Val	Cys	Pro	Leu	Ser	Trp	Phe	Gly	Pro	Trp	Val	Arg	Glu	
				305					310					315	
Ser	His	Val	Thr	Leu	Ala	Ser	Pro	Glu	Glu	Thr	Arg	Cys	His	Phe	
				320					325					330	
Pro	Pro	Lys	Asn	Ala	Gly	Arg	Leu	Leu	Leu	Glu	Leu	Asp	Tyr	Ala	
				335					340					345	
Asp	Phe	Gly	Cys	Pro	Ala	Thr	Thr	Thr	Thr	Ala	Thr	Val	Pro	Thr	
				350					355					360	
Thr	Arg	Pro	Val	Val	Arg	Glu	Pro	Thr	Ala	Leu	Ser	Ser	Ser	Leu	
				365					370					375	
Ala	Pro	Thr	Trp	Leu	Ser	Pro	Thr	Ala	Pro	Ala	Thr	Glu	Ala	Pro	
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Ser	Pro	Pro	Ser	Thr	Ala	Pro	Pro	Thr	Val	Gly	Pro	Val	Pro	Gln	
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Pro	Gln	Asp	Cys	Pro	Pro	Ser	Thr	Cys	Leu	Asn	Gly	Gly	Thr	Cys	
				410					415					420	
His	Leu	Gly	Thr	Arg	His	His	Leu	Ala	Cys	Leu	Cys	Pro	Glu	Gly	
				425					430					435	
Phe	Thr	Gly	Leu	Tyr	Cys	Glu	Ser	Gln	Met	Gly	Gln	Gly	Thr	Arg	
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				455					460					465	
Leu	Gly	Ile	Glu	Pro	Val	Ser	Pro	Thr	Ser	Leu	Arg	Val	Gly	Leu	
				470					475					480	
Gln	Arg	Tyr	Leu	Gln	Gly	Ser	Ser	Val	Gln	Leu	Arg	Ser	Leu	Arg	
				485					490					495	
Leu	Thr	Tyr	Arg	Asn	Leu	Ser	Gly	Pro	Asp	Lys	Arg	Leu	Val	Thr	
				500					505					510	
Leu	Arg	Leu	Pro	Ala	Ser	Leu	Ala	Glu	Tyr	Thr	Val	Thr	Gln	Leu	
				515					520					525	

Arg	Pro	Asn	Ala	Thr	Tyr	Ser	Val	Cys	Val	Met	Pro	Leu	Gly	Pro
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Gly	Arg	Val	Pro	Glu	Gly	Glu	Glu	Ala	Cys	Gly	Glu	Ala	His	Thr
				545					550					555
Pro	Pro	Ala	Val	His	Ser	Asn	His	Ala	Pro	Val	Thr	Gln	Ala	Arg
				560					565					570
Glu	Gly	Asn	Leu	Pro	Leu	Leu	Ile	Ala	Pro	Ala	Leu	Ala	Ala	Val
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Leu	Leu	Ala	Ala	Leu	Ala	Ala	Val	Gly	Ala	Ala	Tyr	Cys	Val	Arg
				590					595					600
Arg	Gly	Arg	Ala	Met	Ala	Ala	Ala	Ala	Gln	Asp	Lys	Gly	Gln	Val
				605					610					615
Gly	Pro	Gly	Ala	Gly	Pro	Leu	Glu	Leu	Glu	Gly	Val	Lys	Val	Pro
				620					625					630
Leu	Glu	Pro	Gly	Pro	Lys	Ala	Thr	Glu	Gly	Gly	Gly	Glu	Ala	Leu
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Pro	Ser	Gly	Ser	Glu	Cys	Glu	Val	Pro	Leu	Met	Gly	Phe	Pro	Gly
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<223> Synthetic oligonucleotide probe

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<211> 3462

<212> DNA

<213> Homo sapiens

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cataacagaa ttcaacagct ggatctcaaa acctttgaat tcaacaagga 400

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu  
 50 55 60  
 Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg  
 65 70 75  
 Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys  
 80 85 90

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Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	
				110					115					120	
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	
				125					130					135	
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	
				140					145					150	
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	
				155					160					165	
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	
				170					175					180	
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	
				185					190					195	
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	
				200					205					210	
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	
				215					220					225	
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	
				230					235					240	
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	
				245					250					255	
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	
				260					265					270	
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	
				275					280					285	
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	
				290					295					300	
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	
				305					310					315	
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	
				320					325					330	
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	
				335					340					345	
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	
				350					355					360	
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	
				365					370					375	
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	

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Ser Cys Phe Ala	Asn Asn Thr Pro Leu	Glu His Leu Asp Leu	Ser
	395	400	405
Gln Asn Leu Leu	Gln His Lys Asn Asp	Glu Asn Cys Ser Trp	Pro
	410	415	420
Glu Thr Val Val	Asn Met Asn Leu Ser	Tyr Asn Lys Leu Ser	Asp
	425	430	435
Ser Val Phe Arg	Cys Leu Pro Lys Ser	Ile Gln Ile Leu Asp	Leu
	440	445	450
Asn Asn Asn Gln	Ile Gln Thr Val Pro	Lys Glu Thr Ile His	Leu
	455	460	465
Met Ala Leu Arg	Glu Leu Asn Ile Ala	Phe Asn Phe Leu Thr	Asp
	470	475	480
Leu Pro Gly Cys	Ser His Phe Ser Arg	Leu Ser Val Leu Asn	Ile
	485	490	495
Glu Met Asn Phe	Ile Leu Ser Pro Ser	Leu Asp Phe Val Gln	Ser
	500	505	510
Cys Gln Glu Val	Lys Thr Leu Asn Ala	Gly Arg Asn Pro Phe	Arg
	515	520	525
Cys Thr Cys Glu	Leu Lys Asn Phe Ile	Gln Leu Glu Thr Tyr	Ser
	530	535	540
Glu Val Met Met	Val Gly Trp Ser Asp	Ser Tyr Thr Cys Glu	Tyr
	545	550	555
Pro Leu Asn Leu	Arg Gly Thr Arg Leu	Lys Asp Val His Leu	His
	560	565	570
Glu Leu Ser Cys	Asn Thr Ala Leu Leu	Ile Val Thr Ile Val	Val
	575	580	585
Ile Met Leu Val	Leu Gly Leu Ala Val	Ala Phe Cys Cys Leu	His
	590	595	600
Phe Asp Leu Pro	Trp Tyr Leu Arg Met	Leu Gly Gln Cys Thr	Gln
	605	610	615
Thr Trp His Arg	Val Arg Lys Thr Thr	Gln Glu Gln Leu Lys	Arg
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Asn Val Arg Phe	His Ala Phe Ile Ser	Tyr Ser Glu His Asp	Ser
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Leu Trp Val Lys	Asn Glu Leu Ile Pro	Asn Leu Glu Lys Glu	Asp
	650	655	660
Gly Ser Ile Leu	Ile Cys Leu Tyr Glu	Ser Tyr Phe Asp Pro	Gly
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Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr	
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Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp	
				695					700					705	
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu	
				710					715					720	
Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe	
				725					730					735	
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu	
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Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly	
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Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu	
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Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn	
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<210> 61

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<212> DNA

<213> Homo sapiens

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 aagtgcctgg aagagagggg gcattgtgag gcagggtccca aaaggggaagg 2750  
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 catttcccca gctgggctgt cccaaatggt accatttgag atgctcccag 3050  
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 acaaataaat tctgtgttct ttgacaata gcgtcattgc caagtgcaca 3150  
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 aataaagcaa atggtaagac ccttaaaaaa aaaaaaaaaa aaaaaaaaaa 3750  
 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62  
 <211> 756  
 <212> PRT  
 <213> Homo sapiens

<400> 62  
 Met Ser Arg Pro Gly Thr Ala Thr Pro Ala Leu Ala Leu Val Leu  
 1 5 10 15  
 Leu Ala Val Thr Leu Ala Gly Val Gly Ala Gln Gly Ala Ala Leu  
 20 25 30

Glu	Asp	Pro	Asp	Tyr	Tyr	Gly	Gln	Glu	Ile	Trp	Ser	Arg	Glu	Pro	35	40	45
Tyr	Tyr	Ala	Arg	Pro	Glu	Pro	Glu	Leu	Glu	Thr	Phe	Ser	Pro	Pro	50	55	60
Leu	Pro	Ala	Gly	Pro	Gly	Glu	Glu	Trp	Glu	Arg	Arg	Pro	Gln	Glu	65	70	75
Pro	Arg	Pro	Pro	Lys	Arg	Ala	Thr	Lys	Pro	Lys	Lys	Ala	Pro	Lys	80	85	90
Arg	Glu	Lys	Ser	Ala	Pro	Glu	Pro	Pro	Pro	Pro	Gly	Lys	His	Ser	95	100	105
Asn	Lys	Lys	Val	Met	Arg	Thr	Lys	Ser	Ser	Glu	Lys	Ala	Ala	Asn	110	115	120
Asp	Asp	His	Ser	Val	Arg	Val	Ala	Arg	Glu	Asp	Val	Arg	Glu	Ser	125	130	135
Cys	Pro	Pro	Leu	Gly	Leu	Glu	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gln	140	145	150
Leu	His	Ala	Ser	Thr	Val	Lys	Arg	Tyr	Gly	Leu	Gly	Ala	His	Arg	155	160	165
Gly	Arg	Leu	Asn	Ile	Gln	Ala	Gly	Ile	Asn	Glu	Asn	Asp	Phe	Tyr	170	175	180
Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln	Gln	Trp	Ile	185	190	195
Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg	Phe	Thr	Gly	Val	Ile	Thr	200	205	210
Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr	215	220	225
Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys	230	235	240
Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu	245	250	255
Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr	260	265	270
Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys	275	280	285
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn	290	295	300
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp	305	310	315
Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val			

	320		325		330
Val Asn Glu Met	Cys Pro Asn Ile Thr	Arg Ile Tyr Asn Ile Gly			
	335	340			345
Lys Ser His Gln	Gly Leu Lys Leu Tyr	Ala Val Glu Ile Ser Asp			
	350	355			360
His Pro Gly Glu	His Glu Val Gly Glu	Pro Glu Phe His Tyr Ile			
	365	370			375
Ala Gly Ala His	Gly Asn Glu Val Leu	Gly Arg Glu Leu Leu Leu			
	380	385			390
Leu Leu Val Gln	Phe Val Cys Gln Glu	Tyr Leu Ala Arg Asn Ala			
	395	400			405
Arg Ile Val His	Leu Val Glu Glu Thr	Arg Ile His Val Leu Pro			
	410	415			420
Ser Leu Asn Pro	Asp Gly Tyr Glu Lys	Ala Tyr Glu Gly Gly Ser			
	425	430			435
Glu Leu Gly Gly	Trp Ser Leu Gly Arg	Trp Thr His Asp Gly Ile			
	440	445			450
Asp Ile Asn Asn	Asn Phe Pro Asp Leu	Asn Thr Leu Leu Trp Glu			
	455	460			465
Ala Glu Asp Arg	Gln Asn Val Pro Arg	Lys Val Pro Asn His Tyr			
	470	475			480
Ile Ala Ile Pro	Glu Trp Phe Leu Ser	Glu Asn Ala Thr Val Ala			
	485	490			495
Ala Glu Thr Arg	Ala Val Ile Ala Trp	Met Glu Lys Ile Pro Phe			
	500	505			510
Val Leu Gly Gly	Asn Leu Gln Gly Gly	Glu Leu Val Val Ala Tyr			
	515	520			525
Pro Tyr Asp Leu	Val Arg Ser Pro Trp	Lys Thr Gln Glu His Thr			
	530	535			540
Pro Thr Pro Asp	Asp His Val Phe Arg	Trp Leu Ala Tyr Ser Tyr			
	545	550			555
Ala Ser Thr His	Arg Leu Met Thr Asp	Ala Arg Arg Arg Val Cys			
	560	565			570
His Thr Glu Asp	Phe Gln Lys Glu Glu	Gly Thr Val Asn Gly Ala			
	575	580			585
Ser Trp His Thr	Val Ala Gly Ser Leu	Asn Asp Phe Ser Tyr Leu			
	590	595			600
His Thr Asn Cys	Phe Glu Leu Ser Ile	Tyr Val Gly Cys Asp Lys			
	605	610			615

Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg	
				620					625					630	
Glu	Ser	Leu	Ile	Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys	
				635					640					645	
Gly	Leu	Val	Arg	Asp	Ser	His	Gly	Lys	Gly	Ile	Pro	Asn	Ala	Ile	
				650					655					660	
Ile	Ser	Val	Glu	Gly	Ile	Asn	His	Asp	Ile	Arg	Thr	Ala	Asn	Asp	
				665					670					675	
Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr	
				680					685					690	
Ala	Lys	Ala	Glu	Gly	Phe	Thr	Ala	Ser	Thr	Lys	Asn	Cys	Met	Val	
				695					700					705	
Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	Asp	Phe	Thr	Leu	Ser	Lys	
				710					715					720	
Thr	Asn	Met	Ala	Arg	Ile	Arg	Glu	Ile	Met	Glu	Lys	Phe	Gly	Lys	
				725					730					735	
Gln	Pro	Val	Ser	Leu	Pro	Ala	Arg	Arg	Leu	Lys	Leu	Arg	Gly	Arg	
				740					745					750	
Lys	Arg	Arg	Gln	Arg	Gly										
				755											

<210> 63  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 63  
 gttctcaatg agctaccctg cccc 24

<210> 64  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 64  
 cgcgatgtag tggaactcgg gctc 24

<210> 65  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 65

atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66

<211> 2854

<212> DNA

<213> Homo sapiens

<400> 66

ctaagaggac aagatgaggc cggcctctc atttctccta gcccttctgt 50

tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100

cccagccccg gcttcagctc tttcccaggt gttgactcca gctccagctt 150

cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200

gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250

cgtgggacct gccagtgtc tgtttccctg ccagacacca cttttcccg 300

ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350

ttgagaaaaga actttctaaa gtgagggaa atgtccaatt aattagtgtg 400

tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450

ggataccatt tcttacctg aactggactt cgagctgac aaggtagaag 500

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gccgagaaat cgtggctctg aagaccaagc tgaaagagtg tgaggcctct 700

aaagatcaaa acaccctgt cgtccacct cctcccactc cagggagctg 750

tggtcatggg ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800

actggagagg gttttcttat ctatatggtg cttggggtag ggattactct 850

ccccagcatc caaacaagg actgtattgg gtggcgccat tgaatacaga 900

tgggagactg ttggagtatt atagactgta caacacactg gatgatttgc 950

tattgtatat aaatgctcga gagttgcgga tcacctatgg ccaaggtagt 1000

ggtacagcag tttacaacaa caacatgtac gtcaacatgt acaacaccgg 1050

gaatattgcc agagttaacc tgaccaccaa cacgattgct gtgactcaaa 1100

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aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850  
aaaa 2854

<210> 67  
<211> 510  
<212> PRT  
<213> Homo sapiens

<400> 67  
Met Arg Pro Gly Leu Ser Phe Leu Leu Ala Leu Leu Phe Phe Leu  
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Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro  
20 25 30  
Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser  
35 40 45  
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu  
50 55 60  
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly  
65 70 75  
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro  
80 85 90  
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr  
95 100 105  
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val  
110 115 120  
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu  
125 130 135  
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser  
140 145 150  
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu  
155 160 165  
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser  
170 175 180  
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr  
185 190 195  
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu  
200 205 210

Ala	Ile	Arg	Arg	Glu	Ile	Val	Ala	Leu	Lys	Thr	Lys	Leu	Lys	Glu	215	220	225
Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro	230	235	240
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser	245	250	255
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu	260	265	270
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys	275	280	285
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu	290	295	300
Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr	305	310	315
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly	320	325	330
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr	335	340	345
Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val	350	355	360
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr	365	370	375
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn	380	385	390
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met	395	400	405
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr	410	415	420
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met	425	430	435
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr	440	445	450
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly	455	460	465
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser	470	475	480
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp	485	490	495
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln			



500

505

510

<210> 68  
 <211> 410  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 206, 217, 387  
 <223> unknown base

<400> 68  
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 cctgtcgtcc accctcctcc cactccaggg agctgtgggc atgggtgggtgt 100  
 ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agaggggtttt 150  
 cttatctata tgggtgcttg ggtagggatt actctcccca gcatccaaac 200  
 aaaggnatgt attggngggc gccattgaat acagatggga gactgttgga 250  
 gtattataga ctgtacaacc cactggatga ttgctattg tatataaatg 300  
 ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagtttac 350  
 aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400  
 taacctgacc 410

<210> 69  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 69  
 agctgtgggc atgggtgggtgt ggtg 24

<210> 70  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 70  
 ctaccttggc cataggtgat ccgc 24

<210> 71  
 <211> 42  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 71  
 catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72  
 <211> 3127  
 <212> DNA  
 <213> Homo sapiens

<400> 72  
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 tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150  
 ccgtgtttgc tatgccgatg ctgtcctagt ggaaacaact ccactgtaac 200  
 tagattgatc tatgcacttt tcttgcttgt tggagtatgt gtagcttgtg 250  
 taatgttgat accaggaatg gaagaacaac tgaataagat tcctggattt 300  
 tgtgagaatg agaaagggtg tgtcccttgt aacatthttgg ttggctataa 350  
 agctgtatat cgthttgtgct ttggthttggc tatgttctat cttcttctct 400  
 ctttactaat gatcaaagtg aagagtagca gtgacctag agctgcagtg 450  
 cacaatggat tttggthtctt taaatthtgct gcagcaattg caattattat 500  
 tggggcattc ttcattccag aaggaaacttt tacaactgtg tggthttatg 550  
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 cacaaccaag atctggttht ttacagtctt cagtaattac agtctacaca 900  
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caggtaggga gtgttttagt gacaatagtg taggttatgg atggaggtgt 2000  
cgggtactaaa ttgaataacg agtaaataat cttacttggg tagagatggc 2050  
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ggttcagtgg aaatgtttgg aactctgaag gatttagaca aggttttgaa 2150  
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cacatggtga acctgttcta taaaaataat ctggctttga gcatatgcct 2350  
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gttgcatgta gcaagtcacg tcactgcact ctagctggca cagagtaagc 2450  
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aggaagtaac tgcaaaacca ctaggcttta gtaggtactt atataaaatc 2550  
tagtccagtt ctctcattta aaaaaatgaa gacactgaaa tacagactta 2600

aatagctcag atagctaatt aggaaatttc aagttggcca ataatagcat 2650  
tctctctgac atttaaaaat aatttctatt caaaatacat gcatattgat 2700  
ttacacctca tactgtgata attaatgtga tgtggattgc tgggtgccag 2750  
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gaaaatcaag cagtatgaga gtttagttat ttgtatgtgt cactagtgtc 2950  
taatgaagct tttaaaatct acaatttctt ctttaaaaat atttattaat 3000  
gtgaatggaa tataacaatt cagcttaatt ccccaacctt attctgtgtg 3050  
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<210> 73

<211> 453

<212> PRT

<213> Homo sapiens

<400> 73

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				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150

Val Trp Phe Tyr	Val Gly Met Ala Gly	Ala Phe Cys Phe Ile Leu	155	160	165
Ile Gln Leu Val	Leu Leu Ile Asp Phe	Ala His Ser Trp Asn Glu	170	175	180
Ser Trp Val Glu	Lys Met Glu Glu Gly	Asn Ser Arg Cys Trp Tyr	185	190	195
Ala Ala Leu Leu	Ser Ala Thr Ala Leu	Asn Tyr Leu Leu Ser Leu	200	205	210
Val Ala Ile Val	Leu Phe Phe Val Tyr	Tyr Thr His Pro Ala Ser	215	220	225
Cys Ser Glu Asn	Lys Ala Phe Ile Ser	Val Asn Met Leu Leu Cys	230	235	240
Val Gly Ala Ser	Val Met Ser Ile Leu	Pro Lys Ile Gln Glu Ser	245	250	255
Gln Pro Arg Ser	Gly Leu Leu Gln Ser	Ser Val Ile Thr Val Tyr	260	265	270
Thr Met Tyr Leu	Thr Trp Ser Ala Met	Thr Asn Glu Pro Glu Thr	275	280	285
Asn Cys Asn Pro	Ser Leu Leu Ser Ile	Ile Gly Tyr Asn Thr Thr	290	295	300
Ser Thr Val Pro	Lys Glu Gly Gln Ser	Val Gln Trp Trp His Ala	305	310	315
Gln Gly Ile Ile	Gly Leu Ile Leu Phe	Leu Leu Cys Val Phe Tyr	320	325	330
Ser Ser Ile Arg	Thr Ser Asn Asn Ser	Gln Val Asn Lys Leu Thr	335	340	345
Leu Thr Ser Asp	Glu Ser Thr Leu Ile	Glu Asp Gly Gly Ala Arg	350	355	360
Ser Asp Gly Ser	Leu Glu Asp Gly Asp	Asp Val His Arg Ala Val	365	370	375
Asp Asn Glu Arg	Asp Gly Val Thr Tyr	Ser Tyr Ser Phe Phe His	380	385	390
Phe Met Leu Phe	Leu Ala Ser Leu Tyr	Ile Met Met Thr Leu Thr	395	400	405
Asn Trp Ser Arg	Tyr Glu Pro Ser Arg	Glu Met Lys Ser Gln Trp	410	415	420
Thr Ala Val Trp	Val Lys Ile Ser Ser	Ser Trp Ile Gly Ile Val	425	430	435
Leu Tyr Val Trp	Thr Leu Val Ala Pro	Leu Val Leu Thr Asn Arg			

440

445

450

Asp Phe Asp

&lt;210&gt; 74

&lt;211&gt; 480

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; unsure

&lt;222&gt; 48, 163

&lt;223&gt; unknown base

&lt;400&gt; 74

gcgagaaaga agctgtctcc atcttgtctg tatcccgtg cttcttnga 50  
 cgttgtggag atggggagcg tccctggggc tgtgctccat ggcgagctgg 100  
 ataccatggt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150  
 tagtggaaac aantccactg taactagatt gatctatgca cttttcttgc 200  
 ttgttgaggt atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250  
 caactgaata agattcctgg attttgtgag aatgagaaag gtgttgtccc 300  
 ttgtaacatt ttggttggt ataaagctgt atacgtttg tgctttggtt 350  
 tggctatggt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400  
 agcagtgatc ctagagctgc agtgcacaat ggattttggt tctttaaatt 450  
 tgctgcagca attgcaatta ttattggggc 480

&lt;210&gt; 75

&lt;211&gt; 438

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; unsure

&lt;222&gt; 32, 65, 92, 121, 142, 154, 170, 293, 315, 323

&lt;223&gt; unknown base

&lt;400&gt; 75

gttattgtga actttgtgga gatgggaggt cntggggctg tgttccatgg 50  
 cgagctggat accangtttg tgtggaagtg ccccggtttt gntatgccga 100  
 tgctgtccta gtggaaacaa ntccactgta attagattga tntatgcact 150  
 tttnttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200  
 tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250  
 gttgtccctt gtaacatttt gggtggctat aaagctgtat atngtttgtg 300

ctttggtttg gctangttct atntttctct ctctttacta atgatcaaag 350  
tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400  
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76  
<211> 473  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 48  
<223> unknown base

<400> 76  
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gagatgggga gcgtccttgg ggttggtgctc catggcgagc tggataccat 100  
gtttgtgtgg aagtgcctcg tgtttgctat gccgatgctg tcctagtggg 150  
aacaactcca ctgtaactag attgatctat gcacttttct tgcttggttg 200  
agtatgtgta gcttggtgta tggtgatacc aggaatggaa gaacaactga 250  
ataagattcc tggattttgt gagaatgaga aagggtgttg cccttgtaac 300  
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggtat 350  
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagt 400  
atcctagagc tgcagtgcac aatggatttt gggtctttta atttgcgtga 450  
gcaattgcaa ttattattgg ggc 473

<210> 77  
<211> 666  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 21, 111  
<223> unknown base

<400> 77  
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actttttcct tgcttggttg agtatgtgta gctttgtgta atgttggtcc 100  
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150  
gaaagggtgt gtcccccttg aacatttttg gttggctata aagctgtata 200  
tcgtttgtgc tttggtttgg ctatgttcta tcttcttctc tctttactaa 250

tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300  
 ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350  
 cttcattcca gaaggaactt ttacaactgt gtgggtttat gtaggcattg 400  
 caggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450  
 gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaaactc 500  
 gagatgttgg tatgcagcct tggtatcagc tacagctctg aattatctgc 550  
 tgtcttttagt tgctatcgtc ctgttctttg tctactacac tcatccagcc 600  
 agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650  
 tgggtgcttct gtaatg 666

<210> 78  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 78  
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<210> 79  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 79  
 gtcaacatgc tcctctgc 18

<210> 80  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 80  
 aatccattgt gcactgcagc tctagg 26

<210> 81  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe



<400> 81  
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<210> 82  
 <211> 54  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 82  
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 gcac 54

<210> 83  
 <211> 3906  
 <212> DNA  
 <213> Homo sapiens

<400> 83  
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 gcggccggcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100  
 cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggagagtc 150  
 ctgtgaaagc agataaaaaga aaacatttat taacgtgtca ttacgagggg 200  
 agcgcccgcg cggggctgtc gcaactccccg cggaacattt ggctccctcc 250  
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 gcacacaagg ctctggctcg ctccctccc tcgtttccag ctctggggcg 450  
 aatcccacat ctgtttcaac tctccgccga gggcgagcag gagcgagagt 500  
 gtgtcgaatc tgcgagtga gagggacgag ggaaaagaaa caaagccaca 550  
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 aagaagcagg acagaggcaa cgtggagagg ctgaaaacag tgcagagacg 3700  
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<210> 84

<211> 867

<212> PRT

<213> Homo sapiens

<400> 84

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Phe	Ser	Leu	Leu	Gly	Gly	Ser	Ser	Ala	Phe	Leu	Ser	His	His	Arg	
				20					25					30	
Leu	Lys	Gly	Arg	Phe	Gln	Arg	Asp	Arg	Arg	Asn	Ile	Arg	Pro	Asn	
				35					40					45	
Ile	Ile	Leu	Val	Leu	Thr	Asp	Asp	Gln	Asp	Val	Glu	Leu	Gly	Ser	
				50					55					60	
Met	Gln	Val	Met	Asn	Lys	Thr	Arg	Arg	Ile	Met	Glu	Gln	Gly	Gly	
				65					70					75	
Ala	His	Phe	Ile	Asn	Ala	Phe	Val	Thr	Thr	Pro	Met	Cys	Cys	Pro	
				80					85					90	
Ser	Arg	Ser	Ser	Ile	Leu	Thr	Gly	Lys	Tyr	Val	His	Asn	His	Asn	
				95					100					105	
Thr	Tyr	Thr	Asn	Asn	Glu	Asn	Cys	Ser	Ser	Pro	Ser	Trp	Gln	Ala	
				110					115					120	
Gln	His	Glu	Ser	Arg	Thr	Phe	Ala	Val	Tyr	Leu	Asn	Ser	Thr	Gly	
				125					130					135	
Tyr	Arg	Thr	Ala	Phe	Phe	Gly	Lys	Tyr	Leu	Asn	Glu	Tyr	Asn	Gly	
				140					145					150	
Ser	Tyr	Val	Pro	Pro	Gly	Trp	Lys	Glu	Trp	Val	Gly	Leu	Leu	Lys	
				155					160					165	
Asn	Ser	Arg	Phe	Tyr	Asn	Tyr	Thr	Leu	Cys	Arg	Asn	Gly	Val	Lys	
				170					175					180	
Glu	Lys	His	Gly	Ser	Asp	Tyr	Ser	Lys	Asp	Tyr	Leu	Thr	Asp	Leu	
				185					190					195	
Ile	Thr	Asn	Asp	Ser	Val	Ser	Phe	Phe	Arg	Thr	Ser	Lys	Lys	Met	
				200					205					210	
Tyr	Pro	His	Arg	Pro	Val	Leu	Met	Val	Ile	Ser	His	Ala	Ala	Pro	
				215					220					225	
His	Gly	Pro	Glu	Asp	Ser	Ala	Pro	Gln	Tyr	Ser	Arg	Leu	Phe	Pro	

				230					235					240
Asn	Ala	Ser	Gln	His	Ile	Thr	Pro	Ser	Tyr	Asn	Tyr	Ala	Pro	Asn
				245					250					255
Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro
				260					265					270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln
				275					280					285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met
				290					295					300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr
				305					310					315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly
				320					325					330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val
				335					340					345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val
				350					355					360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu
				365					370					375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu
				380					385					390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met
				395					400					405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu
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His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe
				425					430					435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu
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Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val
				455					460					465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro
				470					475					480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys
				485					490					495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp
				500					505					510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys
				515					520					525

Lys Tyr Lys Ala	Ser Tyr Val Arg Ser	Arg Ser Ile Arg Ser Val	530	535	540
Ala Ile Glu Val	Asp Gly Arg Val Tyr	His Val Gly Leu Gly Asp	545	550	555
Ala Ala Gln Pro	Arg Asn Leu Thr Lys	Arg His Trp Pro Gly Ala	560	565	570
Pro Glu Asp Gln	Asp Asp Lys Asp Gly	Gly Asp Phe Ser Gly Thr	575	580	585
Gly Gly Leu Pro	Asp Tyr Ser Ala Ala	Asn Pro Ile Lys Val Thr	590	595	600
His Arg Cys Tyr	Ile Leu Glu Asn Asp	Thr Val Gln Cys Asp Leu	605	610	615
Asp Leu Tyr Lys	Ser Leu Gln Ala Trp	Lys Asp His Lys Leu His	620	625	630
Ile Asp His Glu	Ile Glu Thr Leu Gln	Asn Lys Ile Lys Asn Leu	635	640	645
Arg Glu Val Arg	Gly His Leu Lys Lys	Lys Arg Pro Glu Glu Cys	650	655	660
Asp Cys His Lys	Ile Ser Tyr His Thr	Gln His Lys Gly Arg Leu	665	670	675
Lys His Arg Gly	Ser Ser Leu His Pro	Phe Arg Lys Gly Leu Gln	680	685	690
Glu Lys Asp Lys	Val Trp Leu Leu Arg	Glu Gln Lys Arg Lys Lys	695	700	705
Lys Leu Arg Lys	Leu Leu Lys Arg Leu	Gln Asn Asn Asp Thr Cys	710	715	720
Ser Met Pro Gly	Leu Thr Cys Phe Thr	His Asp Asn Gln His Trp	725	730	735
Gln Thr Ala Pro	Phe Trp Thr Leu Gly	Pro Phe Cys Ala Cys Thr	740	745	750
Ser Ala Asn Asn	Asn Thr Tyr Trp Cys	Met Arg Thr Ile Asn Glu	755	760	765
Thr His Asn Phe	Leu Phe Cys Glu Phe	Ala Thr Gly Phe Leu Glu	770	775	780
Tyr Phe Asp Leu	Asn Thr Asp Pro Tyr	Gln Leu Met Asn Ala Val	785	790	795
Asn Thr Leu Asp	Arg Asp Val Leu Asn	Gln Leu His Val Gln Leu	800	805	810
Met Glu Leu Arg	Ser Cys Lys Gly Tyr	Lys Gln Cys Asn Pro Arg			

	815		820		825
Thr Arg Asn Met Asp Leu Asp Gly Gly Ser Tyr Glu Gln Tyr Arg					
	830		835		840
Gln Phe Gln Arg Arg Lys Trp Pro Glu Met Lys Arg Pro Ser Ser					
	845		850		855
Lys Ser Leu Gly Gln Leu Trp Glu Gly Trp Glu Gly					
	860		865		

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 <210> 94  
 <211> 971  
 <212> DNA  
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<210> 95  
<211> 115  
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Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr  
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Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg  
35 40 45  
Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro  
50 55 60

Phe	Arg	Arg	Arg	Gly	His	Leu	Gly	Ile	Phe	His	His	His	Arg	His
				65					70					75
Pro	Gly	His	Val	Ser	His	Val	Pro	Asn	Val	Gly	Leu	His	His	His
				80					85					90
His	His	Pro	Arg	His	Thr	Pro	His	His	Leu	His	His	His	His	His
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Pro	His	Arg	His	His	Pro	Arg	His	Ala	Arg					
				110					115					

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 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150  
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 gggagtcacg gctggacctt gggactgagc ccctggggac taccaagtgg 950  
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caccctcctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050  
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 ctttaggctc ccagggccag aggagccagg gactattttc tgcaccagcc 1200  
 cccagggctg ccgcccctgt tgtgtctttt tttcagactc acagtggagc 1250  
 ttccaggacc cagaataaag ccaatgattt acttgtttca cctggaaaaa 1300  
 aaaaaaaaaa aa 1312

<210> 97

<211> 313

<212> PRT

<213> Homo sapiens

<400> 97

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Leu	Leu	Leu	Leu	Thr	Leu	Leu	Ala	Phe	Ala	Gly	Tyr	Ser	Gly	Leu	20	25	30	
Leu	Ala	Gly	Val	Glu	Val	Ser	Ala	Gly	Ser	Pro	Pro	Ile	Arg	Asn	35	40	45	
Val	Thr	Val	Ala	Tyr	Lys	Phe	His	Met	Gly	Leu	Tyr	Gly	Glu	Thr	50	55	60	
Gly	Arg	Leu	Phe	Thr	Glu	Ser	Cys	Ser	Ile	Ser	Pro	Lys	Leu	Arg	65	70	75	
Ser	Ile	Ala	Val	Tyr	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp	80	85	90	
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	Glu	95	100	105	
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	Phe	110	115	120	
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	Thr	125	130	135	
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	Arg	140	145	150	
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	Cys	155	160	165	
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	Phe	170	175	180	
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	Met	185	190	195	

Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	Asp	
				200					205					210	
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	Ser	
				215					220					225	
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	Ala	
				230					235					240	
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	Gly	
				245					250					255	
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	Gly	
				260					265					270	
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	Gly	
				275					280					285	
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	Lys	
				290					295					300	
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu			
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<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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cacgcttcac atacactaca cgggaagctt ggtagatgga cgtattattg 300
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gcactaatcc gagccaacta ctggctaaag ctggtgaagg gcattttgcc 550
tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600
acctatacag aaaggccaat agaccctaaag tctccaaaaa gaagctcaag 650
gaagagaaac gaaacaagag caaaaagaaa taataaataa taaattttaa 700

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<210> 99

<211> 201

<212> PRT

<213> Homo sapiens

<400> 99

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Leu	Leu	Leu	Ser	Ala	Ala	Val	Cys	Arg	Ala	Glu	Ala	Gly	Leu	Glu
				20					25					30

Thr	Glu	Ser	Pro	Val	Arg	Thr	Leu	Gln	Val	Glu	Thr	Leu	Val	Glu
				35					40					45

Pro	Pro	Glu	Pro	Cys	Ala	Glu	Pro	Ala	Ala	Phe	Gly	Asp	Thr	Leu
				50					55					60

His	Ile	His	Tyr	Thr	Gly	Ser	Leu	Val	Asp	Gly	Arg	Ile	Ile	Asp
				65					70					75

Thr	Ser	Leu	Thr	Arg	Asp	Pro	Leu	Val	Ile	Glu	Leu	Gly	Gln	Lys
				80					85					90

Gln	Val	Ile	Pro	Gly	Leu	Glu	Gln	Ser	Leu	Leu	Asp	Met	Cys	Val
				95					100					105

Gly	Glu	Lys	Arg	Arg	Ala	Ile	Ile	Pro	Ser	His	Leu	Ala	Tyr	Gly
				110					115					120

Lys	Arg	Gly	Phe	Pro	Pro	Ser	Val	Pro	Ala	Asp	Ala	Val	Val	Gln
				125					130					135

Tyr	Asp	Val	Glu	Leu	Ile	Ala	Leu	Ile	Arg	Ala	Asn	Tyr	Trp	Leu
				140					145					150

Lys	Leu	Val	Lys	Gly	Ile	Leu	Pro	Leu	Val	Gly	Met	Ala	Met	Val
				155					160					165

Pro	Ala	Leu	Leu	Gly	Leu	Ile	Gly	Tyr	His	Leu	Tyr	Arg	Lys	Ala
				170					175					180

Asn	Arg	Pro	Lys	Val	Ser	Lys	Lys	Lys	Leu	Lys	Glu	Glu	Lys	Arg
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Asn	Lys	Ser	Lys	Lys	Lys
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<210> 100

<211> 705

<212> DNA

<213> Homo sapiens

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 gaggtggggc tcgaaaccga aagtcccgctc cggaccctcc aagtggagac 200  
 cctggtggag cccccagAAC catgtgccga gcccgctgct tttggagaca 250  
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 tggtagggat ggccatggtg ccacctcctt gggcctcatt gggtatcacc 600  
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<210> 101

<211> 543

<212> DNA

<213> Homo sapiens

<400> 101

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 accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200  
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<210> 102

<211> 1316

<212> DNA  
<213> Homo sapiens

<400> 102

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                     20                    25                    30  
 Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile  
                     35                    40                    45  
 Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly  
                     50                    55                    60  
 Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn  
                     65                    70                    75  
 Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln  
                     80                    85                    90  
 Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe  
                     95                    100                    105  
 Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val  
                     110                    115                    120  
 Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe  
                     125                    130                    135  
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<210> 104  
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 <212> DNA  
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 <211> 490  
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 <213> Homo sapiens

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 <221> unsure  
 <222> 31, 39, 108, 145, 179, 219, 412, 479  
 <223> unknown base

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 tgggtganta ttttttacag gctggtggat tatcatagat gcagntgtta 150  
 tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200  
 atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250  
 ccgaggtgat agttacagtg aagggtgttt ggggtcaaac ggtgctcgca 300  
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 atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400  
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 <212> DNA  
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 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449  
 <223> unknown base

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 ggaaaagcgc aatantattg ctttccattg ctgctggtgt actatttttt 150  
 acagggtggt ggattatcat agatgcagct gttatttatc ccaccatgaa 200

agattttnaac cactcataacc atgcctgtgg tgttatagca accatagcct 250  
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 tttcatgttg gcctttggat ttctgattgn attctatgcg gattcttctt 400  
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 atttttccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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 tgcagtatng aatggacaag tccgaggtga tagttacagt gaagggttgtt 250  
 tgggtcaaac aggtgntngc atttggttt tngttggttt catgttggcc 300  
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 taaagnaaaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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 ggactgacct gaaaaaaatg tttggatttn tagagggtt gagatgctca 150  
 gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200

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 ccgaggtgat agttacagtg aaggttgtct ggggtcaaaca ggtgctcgca 400  
 tttggctttt cgttggtttc atgttggcct ttggatntct gattgcatct 450  
 atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 500  
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 tg 552

<210> 109  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 109  
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<210> 110  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 110  
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<210> 111  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 111  
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<210> 112  
 <211> 3004  
 <212> DNA  
 <213> Homo sapiens

<400> 112  
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ccgaatcctt tctccgaaga tgtcaaacgg cccccagcgc ccttggtaac 150  
 tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200  
 aagtgccgga gaagctggat gtggtggtaa ttggcagtgg ctttgggggc 250  
 ctggctgcag ctgcaattct agctaaagct ggcaagcgag tcctggtgct 300  
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 agcattggcc gttttatctt ggaccagatc actgaagggc agctggactg 450  
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<210> 113

<211> 610

<212> PRT

<213> Homo sapiens

<400> 113

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Val	Leu	Cys	Lys	Val	Tyr	Leu	Gly	Leu	Phe	Ser	Gly	Ser	Ser	Pro
				20					25					30

Asn	Pro	Phe	Ser	Glu	Asp	Val	Lys	Arg	Pro	Pro	Ala	Pro	Leu	Val
				35					40					45

Thr	Asp	Lys	Glu	Ala	Arg	Lys	Lys	Val	Leu	Lys	Gln	Ala	Phe	Ser
				50					55					60

Ala	Asn	Gln	Val	Pro	Glu	Lys	Leu	Asp	Val	Val	Val	Ile	Gly	Ser
				65					70					75

Gly	Phe	Gly	Gly	Leu	Ala	Ala	Ala	Ala	Ile	Leu	Ala	Lys	Ala	Gly
				80					85					90

Lys	Arg	Val	Leu	Val	Leu	Glu	Gln	His	Thr	Lys	Ala	Gly	Gly	Cys
				95					100					105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile
				110					115					120

His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile
				125					130					135

Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser
				140					145					150

Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys
				155					160					165

Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu
				170					175					180

Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile
				185					190					195

Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu
				200					205					210

Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys
				215					220					225

Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln
				230					235					240

Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu
				245					250					255

Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	
				260					265					270	
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	
				275					280					285	
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	
				290					295					300	
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	
				305					310					315	
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	
				320					325					330	
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	
				335					340					345	
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	
				350					355					360	
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	
				365					370					375	
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	
				380					385					390	
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	
				395					400					405	
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	
				410					415					420	
Glu	Arg	Tyr	Val	Ser	Met	Pro	Arg	Glu	Glu	Ala	Ala	Glu	His	Ile	
				425					430					435	
Pro	Leu	Leu	Phe	Phe	Ala	Phe	Pro	Ser	Ala	Lys	Asp	Pro	Thr	Trp	
				440					445					450	
Glu	Asp	Arg	Phe	Pro	Gly	Arg	Ser	Thr	Met	Ile	Met	Leu	Ile	Pro	
				455					460					465	
Thr	Ala	Tyr	Glu	Trp	Phe	Glu	Glu	Trp	Gln	Ala	Glu	Leu	Lys	Gly	
				470					475					480	
Lys	Arg	Gly	Ser	Asp	Tyr	Glu	Thr	Phe	Lys	Asn	Ser	Phe	Val	Glu	
				485					490					495	
Ala	Ser	Met	Ser	Val	Val	Leu	Lys	Leu	Phe	Pro	Gln	Leu	Glu	Gly	
				500					505					510	
Lys	Val	Glu	Ser	Val	Thr	Ala	Gly	Ser	Pro	Leu	Thr	Asn	Gln	Phe	
				515					520					525	
Tyr	Leu	Ala	Ala	Pro	Arg	Gly	Ala	Cys	Tyr	Gly	Ala	Asp	His	Asp	
				530					535					540	
Leu	Gly	Arg	Leu	His	Pro	Cys	Val	Met	Ala	Ser	Leu	Arg	Ala	Gln	

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Ser	Pro	Ile	Pro	Asn	Leu	Tyr	Leu	Thr	Gly	Gln	Asp	Ile	Phe	Thr
				560					565					570
Cys	Gly	Leu	Val	Gly	Ala	Leu	Gln	Gly	Ala	Leu	Leu	Cys	Ser	Ser
				575					580					585
Ala	Ile	Leu	Lys	Arg	Asn	Leu	Tyr	Ser	Asp	Leu	Lys	Asn	Leu	Asp
				590					595					600
Ser	Arg	Ile	Arg	Ala	Gln	Lys	Lys	Lys	Asn					
				605					610					

<210> 114  
 <211> 1701  
 <212> DNA  
 <213> Homo sapiens

<400> 114  
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 agttgctggg caaatatttc ttgattcaga agaacttgaa ttagaatcct 300  
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 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400  
 tgaagagcca aagaaagtac ggaaaccagc tttgaccgcc attgaaggca 450  
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<210> 115  
 <211> 301  
 <212> PRT  
 <213> Homo sapiens

<400> 115  
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 Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp  
 20 25 30  
 Glu Ser Leu Asp Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val  
 35 40 45  
 Lys Asp His Thr Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe  
 50 55 60  
 Leu Asp Ser Glu Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu  
 65 70 75  
 Glu Asp Ser Leu Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp  
 80 85 90  
 Ile Ser Phe Leu Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu  
 95 100 105

Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly	110	115	120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp	125	130	135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg	140	145	150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp	155	160	165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met	170	175	180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn	185	190	195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu	200	205	210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val	215	220	225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln	230	235	240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro	245	250	255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly	260	265	270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly	275	280	285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg	290	295	300

Leu

<210> 116

<211> 584

<212> DNA

<213> Homo sapiens

<400> 116

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cttccttctg atggggacct tcctgtcagt ttcccagaca gtccctggccc 150

agctggatgc actgctggtc ttcccaggcc aagtggctca actctcctgc 200

acgctcagcc cccagcacgt caccatcagg gactacggtg tgtcctggta 250

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aaggatgagg cccacaatgc ctgtgtcctc accattagtc ccgtgcagcc 400  
tgaagacgac gcggtact actgctctgt tggctacggc tttagtcctt 450  
aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc atttctgccc 500  
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aaaatgggtt aataatattc aacatgtcaa caac 584

<210> 117

<211> 123

<212> PRT

<213> Homo sapiens

<400> 117

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Ser	Val	Ser	Gln	Thr	Val	Leu	Ala	Gln	Leu	Asp	Ala	Leu	Leu	Val
				20				25						30
Phe	Pro	Gly	Gln	Val	Ala	Gln	Leu	Ser	Cys	Thr	Leu	Ser	Pro	Gln
				35				40						45
His	Val	Thr	Ile	Arg	Asp	Tyr	Gly	Val	Ser	Trp	Tyr	Gln	Gln	Arg
				50				55						60
Ala	Gly	Ser	Ala	Pro	Arg	Tyr	Leu	Leu	Tyr	Tyr	Arg	Ser	Glu	Glu
				65				70						75
Asp	His	His	Arg	Pro	Ala	Asp	Ile	Pro	Asp	Arg	Phe	Ser	Ala	Ala
				80				85						90
Lys	Asp	Glu	Ala	His	Asn	Ala	Cys	Val	Leu	Thr	Ile	Ser	Pro	Val
				95				100						105
Gln	Pro	Glu	Asp	Asp	Ala	Asp	Tyr	Tyr	Cys	Ser	Val	Gly	Tyr	Gly
				110				115						120
Phe	Ser	Pro												

<210> 118

<211> 3402

<212> DNA

<213> Homo sapiens

<400> 118

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ccccgccgcc cgcccgtga gcccccgcc gaggtccgga caggccgaga 150

tgacgccgag cccctgttg ctgctcctgc tgccgccgct gctgctggg 200  
 gccttccac cgccgccgc cgccgaggc ccccaaaga tggcggaca 250  
 ggtggtcca cggcaggtg cccggtggg ccgcactgtg cggctgcagt 300  
 gccagtga gggggaccg ccgccgtga ccatgtggac caaggatggc 350  
 cgcaccatcc acagcggtg gagccgcttc cgcgtgctgc cgcaggggct 400  
 gaaggtgaag caggtggagc gggaggatgc cggcgtgtac gtgtgcaagg 450  
 ccaccaacgg cttcggcagc ctgagcgtca actacaccct cgtcgtgctg 500  
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<211> 504

<212> PRT

<213> Homo sapiens

<400> 119

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Met	Ala	Asp	Lys	Val	Val	Pro	Arg	Gln	Val	Ala	Arg	Leu	Gly	Arg	35	40	45	
Thr	Val	Arg	Leu	Gln	Cys	Pro	Val	Glu	Gly	Asp	Pro	Pro	Pro	Leu	50	55	60	
Thr	Met	Trp	Thr	Lys	Asp	Gly	Arg	Thr	Ile	His	Ser	Gly	Trp	Ser	65	70	75	
Arg	Phe	Arg	Val	Leu	Pro	Gln	Gly	Leu	Lys	Val	Lys	Gln	Val	Glu	80	85	90	
Arg	Glu	Asp	Ala	Gly	Val	Tyr	Val	Cys	Lys	Ala	Thr	Asn	Gly	Phe	95	100	105	
Gly	Ser	Leu	Ser	Val	Asn	Tyr	Thr	Leu	Val	Val	Leu	Asp	Asp	Ile	110	115	120	
Ser	Pro	Gly	Lys	Glu	Ser	Leu	Gly	Pro	Asp	Ser	Ser	Ser	Gly	Gly	125	130	135	
Gln	Glu	Asp	Pro	Ala	Ser	Gln	Gln	Trp	Ala	Arg	Pro	Arg	Phe	Thr	140	145	150	
Gln	Pro	Ser	Lys	Met	Arg	Arg	Arg	Val	Ile	Ala	Arg	Pro	Val	Gly	155	160	165	
Ser	Ser	Val	Arg	Leu	Lys	Cys	Val	Ala	Ser	Gly	His	Pro	Arg	Pro	170	175	180	

Asp	Ile	Thr	Trp	Met	Lys	Asp	Asp	Gln	Ala	Leu	Thr	Arg	Pro	Glu	185	190	195
Ala	Ala	Glu	Pro	Arg	Lys	Lys	Lys	Trp	Thr	Leu	Ser	Leu	Lys	Asn	200	205	210
Leu	Arg	Pro	Glu	Asp	Ser	Gly	Lys	Tyr	Thr	Cys	Arg	Val	Ser	Asn	215	220	225
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Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn	245	250	255
Thr	Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val	260	265	270
Arg	Ser	Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu	275	280	285
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Gln	Lys	Phe	Val	Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro	305	310	315
Asp	Gly	Ser	Tyr	Leu	Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln	320	325	330
Asp	Asp	Ala	Gly	Met	Tyr	Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly	335	340	345
Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu	Thr	Val	Leu	Pro	Asp	Pro	Lys	350	355	360
Pro	Pro	Gly	Pro	Pro	Val	Ala	Ser	Ser	Ser	Ser	Ala	Thr	Ser	Leu	365	370	375
Pro	Trp	Pro	Val	Val	Ile	Gly	Ile	Pro	Ala	Gly	Ala	Val	Phe	Ile	380	385	390
Leu	Gly	Thr	Leu	Leu	Leu	Trp	Leu	Cys	Gln	Ala	Gln	Lys	Lys	Pro	395	400	405
Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro	410	415	420
Gly	Thr	Ala	Arg	Asp	Arg	Ser	Gly	Asp	Lys	Asp	Leu	Pro	Ser	Leu	425	430	435
Ala	Ala	Leu	Ser	Ala	Gly	Pro	Gly	Val	Gly	Leu	Cys	Glu	Glu	His	440	445	450
Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val	455	460	465
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr			

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His Thr His Thr His Ser His Thr His Ser His Val Glu Gly Lys			
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Val His Gln His Ile His Tyr Gln Cys			
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<210> 124

<211> 1184

<212> PRT

<213> Homo sapiens

<400> 124

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Ala	Ile	Arg	Phe	Tyr	Tyr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu	80	85	90
Arg	Leu	Glu	Ala	Arg	Thr	Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr	95	100	105
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Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	Asn	Cys	Ser	Asn	Tyr	Thr	Val	125	130	135
Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	Arg	Arg	Asp	Thr	Glu	Arg	140	145	150
Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	Cys	Ser	Ala	Ala	Cys	155	160	165
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Leu	His	Gly	Ala	Val	Ser	Leu	Pro	Gly	Gly	Ala	Pro	Ala	Ser	Gly	230	235	240
Ala	Ala	Ile	Tyr	Leu	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Leu	Thr	Gln	245	250	255
Thr	Asp	Ser	Asp	Gly	Arg	Phe	Arg	Ile	Pro	Gly	Leu	Cys	Pro	Asp	260	265	270
Gly	Lys	Ser	Ile	Leu	Lys	Ile	Thr	Lys	Val	Lys	Phe	Ala	Pro	Ile	275	280	285
Val	Leu	Thr	Met	Pro	Lys	Thr	Ser	Leu	Lys	Ala	Ala	Thr	Ile	Lys	290	295	300
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Glu Thr Lys Ala	Arg Arg Ala Gly Gln	Ser Val Ser Leu Cys Cys			
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Lys Ala Thr Gly	Lys Pro Arg Pro Asp	Lys Tyr Phe Trp Tyr His			
	335		340		345
Asn Asp Thr Leu	Leu Asp Pro Ser Leu	Tyr Lys His Glu Ser Lys			
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Leu Val Leu Arg	Lys Leu Gln Gln His	Gln Ala Gly Glu Tyr Phe			
	365		370		375
Cys Lys Ala Gln	Ser Asp Ala Gly Ala	Val Lys Ser Lys Val Ala			
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Gln Leu Ile Val	Thr Ala Ser Asp Glu	Thr Pro Cys Asn Pro Val			
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Pro Glu Ser Tyr	Leu Ile Arg Leu Pro	His Asp Cys Phe Gln Asn			
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Ala Thr Asn Ser	Phe Tyr Tyr Asp Val	Gly Arg Cys Pro Val Lys			
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Thr Cys Ala Gly	Gln Gln Asp Asn Gly	Ile Arg Cys Arg Asp Ala			
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Val Gln Asn Cys	Cys Gly Ile Ser Lys	Thr Glu Glu Arg Glu Ile			
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Tyr Met Gly Asn	Ser Arg Val Ser Met	Thr Gly Tyr Lys Gly Thr			
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Phe Thr Leu His	Val Pro Gln Asp Thr	Glu Arg Leu Val Leu Thr			
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Phe Val Asp Arg	Leu Gln Lys Phe Val	Asn Thr Thr Lys Val Leu			
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Pro Phe Asn Lys	Lys Gly Ser Ala Val	Phe His Glu Ile Lys Met			
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Leu Arg Arg Lys	Glu Pro Ile Thr Leu	Glu Ala Met Glu Thr Asn			
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Ile Ile Pro Leu	Gly Glu Val Val Gly	Glu Asp Pro Met Ala Glu			
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Gly	Lys	Val	Lys	Val	His	Leu	Asp	Ser	Thr	Gln	Val	Lys	Met	Pro	
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Glu	His	Ile	Ser	Thr	Val	Lys	Leu	Trp	Ser	Leu	Asn	Pro	Asp	Thr	
				695					700					705	
Gly	Leu	Trp	Glu	Glu	Glu	Gly	Asp	Phe	Lys	Phe	Glu	Asn	Gln	Arg	
				710					715					720	
Arg	Asn	Lys	Arg	Glu	Asp	Arg	Thr	Phe	Leu	Val	Gly	Asn	Leu	Glu	
				725					730					735	
Ile	Arg	Glu	Arg	Arg	Leu	Phe	Asn	Leu	Asp	Val	Pro	Glu	Ser	Arg	
				740					745					750	
Arg	Cys	Phe	Val	Lys	Val	Arg	Ala	Tyr	Arg	Ser	Glu	Arg	Phe	Leu	
				755					760					765	
Pro	Ser	Glu	Gln	Ile	Gln	Gly	Val	Val	Ile	Ser	Val	Ile	Asn	Leu	
				770					775					780	
Glu	Pro	Arg	Thr	Gly	Phe	Leu	Ser	Asn	Pro	Arg	Ala	Trp	Gly	Arg	
				785					790					795	
Phe	Asp	Ser	Val	Ile	Thr	Gly	Pro	Asn	Gly	Ala	Cys	Val	Pro	Ala	
				800					805					810	
Phe	Cys	Asp	Asp	Gln	Ser	Pro	Asp	Ala	Tyr	Ser	Ala	Tyr	Val	Leu	
				815					820					825	
Ala	Ser	Leu	Ala	Gly	Glu	Glu	Leu	Gln	Ala	Val	Glu	Ser	Ser	Pro	
				830					835					840	
Lys	Phe	Asn	Pro	Asn	Ala	Ile	Gly	Val	Pro	Gln	Pro	Tyr	Leu	Asn	
				845					850					855	
Lys	Leu	Asn	Tyr	Arg	Arg	Thr	Asp	His	Glu	Asp	Pro	Arg	Val	Lys	
				860					865					870	
Lys	Thr	Ala	Phe	Gln	Ile	Ser	Met	Ala	Lys	Pro	Arg	Pro	Asn	Ser	
				875					880					885	
Ala	Glu	Glu	Ser	Asn	Gly	Pro	Ile	Tyr	Ala	Phe	Glu	Asn	Leu	Arg	

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Ala Cys Glu Glu	Ala Pro Pro Ser Ala	Ala His Phe Arg Phe	Tyr		
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Gln Ile Glu Gly	Asp Arg Tyr Asp Tyr	Asn Thr Val Pro Phe	Asn		
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Glu Asp Asp Pro	Met Ser Trp Thr Glu	Asp Tyr Leu Ala Trp	Trp		
	935		940		945
Pro Lys Pro Met	Glu Phe Arg Ala Cys	Tyr Ile Lys Val Lys	Ile		
	950		955		960
Val Gly Pro Leu	Glu Val Asn Val Arg	Ser Arg Asn Met Gly	Gly		
	965		970		975
Thr His Arg Arg	Thr Val Gly Lys Leu	Tyr Gly Ile Arg Asp	Val		
	980		985		990
Arg Ser Thr Arg	Asp Arg Asp Gln Pro	Asn Val Ser Ala Ala	Cys		
	995		1000		1005
Leu Glu Phe Lys	Cys Ser Gly Met Leu	Tyr Asp Gln Asp Arg	Val		
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Asp Arg Thr Leu	Val Lys Val Ile Pro	Gln Gly Ser Cys Arg	Arg		
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Ala Ser Val Asn	Pro Met Leu His Glu	Tyr Leu Val Asn His	Leu		
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Pro Leu Ala Val	Asn Asn Asp Thr Ser	Glu Tyr Thr Met Leu	Ala		
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Pro Leu Asp Pro	Leu Gly His Asn Tyr	Gly Ile Tyr Thr Val	Thr		
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Asp Gln Asp Pro	Arg Thr Ala Lys Glu	Ile Ala Leu Gly Arg	Cys		
	1085		1090		1095
Phe Asp Gly Thr	Ser Asp Gly Ser Ser	Arg Ile Met Lys Ser	Asn		
	1100		1105		1110
Val Gly Val Ala	Leu Thr Phe Asn Cys	Val Glu Arg Gln Val	Gly		
	1115		1120		1125
Arg Gln Ser Ala	Phe Gln Tyr Leu Gln	Ser Thr Pro Ala Gln	Ser		
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Pro Ala Ala Gly	Thr Val Gln Gly Arg	Val Pro Ser Arg Arg	Gln		
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Gln Arg Ala Ser	Arg Gly Gly Gln Arg	Gln Gly Gly Val Val	Ala		
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<212> DNA  
<213> Homo sapiens

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ctacctacce gtacgcatac atacatatgt gtatatatat gtaaactaga 200  
caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250  
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gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450  
agtgaaactc gatcctccgg atattacctg tggagaccct cctgagacgt 500



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<210> 129

<211> 438

<212> PRT

<213> Homo sapiens

<400> 129

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Val	Ser	Ser	Val	Met	Gln	Pro	Tyr	Pro	Leu	Val	Trp	Gly	His	Tyr
				20					25					30
Asp	Leu	Cys	Lys	Thr	Gln	Ile	Tyr	Thr	Glu	Glu	Gly	Lys	Val	Trp
				35					40					45
Asp	Tyr	Met	Ala	Cys	Gln	Pro	Glu	Ser	Thr	Asp	Met	Thr	Lys	Tyr
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Leu	Lys	Val	Lys	Leu	Asp	Pro	Pro	Asp	Ile	Thr	Cys	Gly	Asp	Pro
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Pro	Glu	Thr	Phe	Cys	Ala	Met	Gly	Asn	Pro	Tyr	Met	Cys	Asn	Asn

80					85					90				
Glu	Cys	Asp	Ala	Ser	Thr	Pro	Glu	Leu	Ala	His	Pro	Pro	Glu	Leu
				95					100					105
Met	Phe	Asp	Phe	Glu	Gly	Arg	His	Pro	Ser	Thr	Phe	Trp	Gln	Ser
				110					115					120
Ala	Thr	Trp	Lys	Glu	Tyr	Pro	Lys	Pro	Leu	Gln	Val	Asn	Ile	Thr
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Leu	Ser	Trp	Ser	Lys	Thr	Ile	Glu	Leu	Thr	Asp	Asn	Ile	Val	Ile
				140					145					150
Thr	Phe	Glu	Ser	Gly	Arg	Pro	Asp	Gln	Met	Ile	Leu	Glu	Lys	Ser
				155					160					165
Leu	Asp	Tyr	Gly	Arg	Thr	Trp	Gln	Pro	Tyr	Gln	Tyr	Tyr	Ala	Thr
				170					175					180
Asp	Cys	Leu	Asp	Ala	Phe	His	Met	Asp	Pro	Lys	Ser	Val	Lys	Asp
				185					190					195
Leu	Ser	Gln	His	Thr	Val	Leu	Glu	Ile	Ile	Cys	Thr	Glu	Glu	Tyr
				200					205					210
Ser	Thr	Gly	Tyr	Thr	Thr	Asn	Ser	Lys	Ile	Ile	His	Phe	Glu	Ile
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Lys	Asp	Arg	Phe	Ala	Leu	Phe	Ala	Gly	Pro	Arg	Leu	Arg	Asn	Met
				230					235					240
Ala	Ser	Leu	Tyr	Gly	Gln	Leu	Asp	Thr	Thr	Lys	Lys	Leu	Arg	Asp
				245					250					255
Phe	Phe	Thr	Val	Thr	Asp	Leu	Arg	Ile	Arg	Leu	Leu	Arg	Pro	Ala
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Val	Gly	Glu	Ile	Phe	Val	Asp	Glu	Leu	His	Leu	Ala	Arg	Tyr	Phe
				275					280					285
Tyr	Ala	Ile	Ser	Asp	Ile	Lys	Val	Arg	Gly	Arg	Cys	Lys	Cys	Asn
				290					295					300
Leu	His	Ala	Thr	Val	Cys	Val	Tyr	Asp	Asn	Ser	Lys	Leu	Thr	Cys
				305					310					315
Glu	Cys	Glu	His	Asn	Thr	Thr	Gly	Pro	Asp	Cys	Gly	Lys	Cys	Lys
				320					325					330
Lys	Asn	Tyr	Gln	Gly	Arg	Pro	Trp	Ser	Pro	Gly	Ser	Tyr	Leu	Pro
				335					340					345
Ile	Pro	Lys	Gly	Thr	Ala	Asn	Thr	Cys	Ile	Pro	Ser	Ile	Ser	Ser
				350					355					360
Ile	Gly	Thr	Asn	Val	Cys	Asp	Asn	Glu	Leu	Leu	His	Cys	Gln	Asn
				365					370					375

Gly Gly Thr Cys His Asn Asn Val Arg Cys Leu Cys Pro Ala Ala  
 380 385 390

Tyr Thr Gly Ile Leu Cys Glu Lys Leu Arg Cys Glu Glu Ala Gly  
 395 400 405

Ser Cys Gly Ser Asp Ser Gly Gln Gly Ala Pro Pro His Gly Thr  
 410 415 420

Pro Ala Leu Leu Leu Leu Thr Thr Leu Leu Gly Thr Ala Ser Pro  
 425 430 435

Leu Val Phe

<210> 130

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 130

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<223> Synthetic oligonucleotide probe

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<210> 132

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 132

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<210> 133

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<212> DNA  
<213> Homo sapiens

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ctatctgctc ctgccagtgt ccagcagcca tggccttctg cttcctggag 400  
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 <212> PRT  
 <213> Homo sapiens

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                     20                    25                    30  
 Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala  
                     35                    40                    45  
 Gln Tyr Pro Gly Arg Gly Ser Ala Glu Gly Cys Asp Phe Ser Ile  
                     50                    55                    60  
 His Phe Ser Ser Phe Gly Asp Val Ala Cys Met Ala Ile Cys Ser  
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 Cys Gln Cys Pro Ala Ala Met Ala Phe Cys Phe Leu Glu Thr Leu  
                     80                    85                    90  
 Trp Trp Glu Phe Thr Ala Ser Tyr Asp Thr Thr Cys Ile Gly Leu  
                     95                    100                    105  
 Ala Ser Arg Pro Tyr Ala Phe Leu Glu Phe Asp Ser Ile Ile Gln  
                     110                    115                    120  
 Lys Val Lys Trp His Phe Asn Tyr Val Ser Ser Ser Gln Met Glu  
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 Cys Ser Leu Glu Lys Ile Gln Glu Glu Leu Lys Leu Gln Pro Pro  
                     140                    145                    150  
 Ala Val Leu Thr Leu Glu Asp Thr Asp Val Ala Asn Gly Val Met  
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 Asn Gly His Thr Pro Met His Leu Glu Pro Ala Pro Asn Phe Arg  
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 Met Glu Pro Val Thr Ala Leu Gly Ile Leu Ser Leu Ile Leu Asn  
                     185                    190                    195  
 Ile Met Cys Ala Ala Leu Asn Leu Ile Arg Gly Val His Leu Ala  
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Gln Thr Ser

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<211> 239  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
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<223> unknown base

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<210> 137  
<211> 2300  
<212> DNA  
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gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950  
ggacctcctg cttttccata cttaactgtg gcctcagcat ggggtagggc 2000  
tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050  
gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100  
tgtgcaatag ggtggggtag gggcagggaa aggactgggc cagggcaggc 2150



tcgggagata gattgtctcc cttgcctctg gcccagcaga gcctaagcac 2200  
 tgtgctatcc tggaggggct ttggaccacc tgaaagacca aggggatagg 2250  
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu	1	5	10	15
Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe	20	25	30	
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys	35	40	45	
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val	50	55	60	
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala	65	70	75	
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu	80	85	90	
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn	95	100	105	
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro	110	115	120	
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr	125	130	135	
Glu	Ser	Glu	Gly	Phe	Ala	Gly	Ser	Arg	Lys	Gly	Val	Leu	Gly	Arg	140	145	150	
Val	Tyr	Glu	Thr	Val	Val	Met	Leu	Met	Leu	Leu	Thr	Leu	Leu	Val	155	160	165	
Leu	Gly	Met	Val	Trp	Val	Ala	Ser	Ala	Ile	Val	Asp	Lys	Asn	Lys	170	175	180	
Ala	Asn	Arg	Glu	Ser	Leu	Tyr	Asp	Phe	Trp	Glu	Tyr	Tyr	Leu	Pro	185	190	195	
Tyr	Leu	Tyr	Ser	Cys	Ile	Ser	Phe	Leu	Gly	Val	Leu	Leu	Leu	Leu	200	205	210	
Val	Cys	Thr	Pro	Leu	Gly	Leu	Ala	Arg	Met	Phe	Ser	Val	Thr	Gly	215	220	225	
Lys	Leu	Leu	Val	Lys	Pro	Arg	Leu	Leu	Glu	Asp	Leu	Glu	Glu	Gln				

	230		235		240
Leu Tyr Cys Ser	Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg	Ile		
	245	250	255		
Cys Asn Pro Thr	Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu	Leu		
	260	265	270		
His Arg Gln Val	Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu	Glu		
	275	280	285		
Lys Arg Arg Lys	Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr	Pro		
	290	295	300		
Leu Ala Met Leu	Cys Leu Leu Val Leu	Thr Gly Leu Ser Val	Leu		
	305	310	315		
Ile Val Ala Ile	His Ile Leu Glu Leu	Leu Ile Asp Glu Ala	Ala		
	320	325	330		
Met Pro Arg Gly	Met Gln Gly Thr Ser	Leu Gly Gln Val Ser	Phe		
	335	340	345		
Ser Lys Leu Gly	Ser Phe Gly Ala Val	Ile Gln Val Val Leu	Ile		
	350	355	360		
Phe Tyr Leu Met	Val Ser Ser Val Val	Gly Phe Tyr Ser Ser	Pro		
	365	370	375		
Leu Phe Arg Ser	Leu Arg Pro Arg Trp	His Asp Thr Ala Met	Thr		
	380	385	390		
Gln Ile Ile Gly	Asn Cys Val Cys Leu	Leu Val Leu Ser Ser	Ala		
	395	400	405		
Leu Pro Val Phe	Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp	Leu		
	410	415	420		
Leu Gly Asp Phe	Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr	Ile		
	425	430	435		
Val Phe Leu Tyr	Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu	Cys		
	440	445	450		
Leu Val Lys Thr	Phe Thr Ala Ala Val	Arg Ala Glu Leu Ile	Arg		
	455	460	465		
Ala Phe Gly Leu	Asp Arg Leu Pro Leu	Pro Val Ser Gly Phe	Pro		
	470	475	480		
Gln Ala Ser Arg	Lys Thr Gln His Gln				
	485				

<210> 139  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<220>  
<221> unsure  
<222> 53, 57  
<223> unknown base

<400> 139  
ggctgccgag ggaaggcccc ttgggttggt cttgggttgct tggcggcggc 50  
ggnnttctcc ccgctcgtcc tccccggggc cagaggcacc tcggcttcag 100  
tcattgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150  
gagaacagct attccacgag aggatccgcg agtgtattat atcaacactt 200  
ctgtttgcaa cactgtacat cctctgccac atcttcctga cccgcttcaa 250  
gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140  
<211> 526  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 197, 349  
<223> unknown base

<400> 140  
gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50  
aggcgggtggt gcctgccctt taaggggcggg gcgtccggac gactgtatct 100  
gagccccaga ctgccccgag tttctgtcgc aggctgogag gaaaggcccc 150  
taggctgggt ctggtgcttg gcgggcggcg cttcctcccc gttgtctntcc 200  
ccgggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250  
cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300  
atccgcgagt gtattatata aacacttctg ttgcaaacac tgtacatcnt 350  
ctgccacatc ttctgaccc gcttcaagaa gcctgctgag ttcaccacag 400  
tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450  
tttaccttgg caattgccct ggggtgctgtc ctgctcctgc cttcttccat 500  
catcagcaat gaggtgctgc actccc 526

<210> 141  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 141  
 gactgtatct gagccccaga ctgc 24

<210> 142  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 142  
 tcagcaatga ggtgctgctc 20

<210> 143  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 143  
 tgaggaagat gagggacagg ttgg 24

<210> 144  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 144  
 tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145  
 <211> 685  
 <212> DNA  
 <213> Homo sapiens

<400> 145  
 gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50  
 caaacctggt ttggaattga ggaaacttct cttttgatct cagcccttgg 100  
 tgggtccaggt cttcatgctg ctgtgggtga tattactggc cctggctcct 150  
 gtcagtggac agtttgcaag gacaccacag cccattattt tcctccagcc 200  
 tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250  
 gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300  
 gggaaagaaa tactaagaga aaccccagac aatatccttg aggttcagga 350  
 atctggagag tacagatgcc aggcccaggg ctcccctctc agtagccctg 400

tgcacttgga tttttcttca gagatgggat ttcctcatgc tgcccaggct 450  
 aatgttgaac tcctgggctc aagtgatctg ctcacctagg cctctcaaag 500  
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550  
 aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaacactg 600  
 aataatacta ttacaagaa tgataatgtc ctggcattcc ttaataaaag 650  
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146

<211> 124

<212> PRT

<213> Homo sapiens

<400> 146

Met	Leu	Leu	Trp	Val	Ile	Leu	Leu	Val	Leu	Ala	Pro	Val	Ser	Gly
1				5					10				15	
Gln	Phe	Ala	Arg	Thr	Pro	Arg	Pro	Ile	Ile	Phe	Leu	Gln	Pro	Pro
				20					25				30	
Trp	Thr	Thr	Val	Phe	Gln	Gly	Glu	Arg	Val	Thr	Leu	Thr	Cys	Lys
				35					40				45	
Gly	Phe	Arg	Phe	Tyr	Ser	Pro	Gln	Lys	Thr	Lys	Trp	Tyr	His	Arg
				50					55				60	
Tyr	Leu	Gly	Lys	Glu	Ile	Leu	Arg	Glu	Thr	Pro	Asp	Asn	Ile	Leu
				65					70				75	
Glu	Val	Gln	Glu	Ser	Gly	Glu	Tyr	Arg	Cys	Gln	Ala	Gln	Gly	Ser
				80					85				90	
Pro	Leu	Ser	Ser	Pro	Val	His	Leu	Asp	Phe	Ser	Ser	Glu	Met	Gly
				95					100				105	
Phe	Pro	His	Ala	Ala	Gln	Ala	Asn	Val	Glu	Leu	Leu	Gly	Ser	Ser
				110					115				120	

Asp Leu Leu Thr

<210> 147

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 147

cagaagaggg ggctagctag ctgtctctgc ggaccaggga gacccccgcg 50  
 cccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100  
 cgcggcggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150  
 gaggaaccat ggctccgcag aacctgagca ccttttgcct gttgctgcta 200

tacctcatcg gggcggatgat tgccggacga gattttctata agatcttggg 250  
 ggtgcctcga agtgcctcta taaaggatat taaaaaggcc tataggaaac 300  
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350  
 gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400  
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450  
 atcagagctc ccatggagac attttttcac acttctttgg ggattttggt 500  
 ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550  
 aagtgatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600  
 gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650  
 ggcaaacgga agtgcaattg tcggcaagag atgcggacca cccagctggg 700  
 ccctgggccc ttccaaatga cccaggagggt ggtctgcgac gaatgcccta 750  
 atgtcaaaact agtgaatgaa gaacgaacgc tggaaagtaga aatagagcct 800  
 ggggtgagag acggcatgga gtaccctttt attggagaag gtgagcctca 850  
 cgtggatggg gagcctggag atttacgggt ccgaatcaaa gttgtcaagc 900  
 acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950  
 tcattagtgt agtcactggg tggttttgag atggatatta ctacttgga 1000  
 tggtcacaag gtacatattt cccgggataa gatcaccagg ccaggagcga 1050  
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatata 1100  
 aagggtcctt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150  
 aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200  
 tgcagaagggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250  
 gactttgttt aaaataagtg aataagcgat atttattata tgcaaggttt 1300  
 ttttgtgtgt gtttttgttt ttattttcaa tatgcaagtt aggcttaatt 1350  
 tttttatcta atgatcatca tgaaatgaat aagagggtt aagaatttgt 1400  
 ccatttgcac tcggaaaaga atgaccagca aaaggtttac taatacctct 1450  
 ccctttgggg atttaatgtc tgggtgctgcc gcctgagttt caagaattaa 1500  
 agctgcaaga ggactccagg agcaaaagaa acacaatata gagggttgga 1550  
 gttgttagca atttcattca aaatgccaac tggagaagtc tgtttttaaa 1600  
 tacattttgt tgttattttt a 1621

<210> 148  
 <211> 358  
 <212> PRT  
 <213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr	1	5	10	15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu	20	25	30	
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr	35	40	45	
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp	50	55	60	
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu	65	70	75	
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly	80	85	90	
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile	95	100	105	
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr	110	115	120	
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile	125	130	135	
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe	140	145	150	
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly	155	160	165	
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu	170	175	180	
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu	185	190	195	
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val	200	205	210	
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile	215	220	225	
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg	230	235	240	
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly	245	250	255	
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu				

260	265	270
Val Gly Phe Glu Met Asp Ile Thr His	Leu Asp Gly His Lys Val	
275	280	285
His Ile Ser Arg Asp Lys Ile Thr Arg	Pro Gly Ala Lys Leu Trp	
290	295	300
Lys Lys Gly Glu Gly Leu Pro Asn Phe	Asp Asn Asn Asn Ile Lys	
305	310	315
Gly Ser Leu Ile Ile Thr Phe Asp Val	Asp Phe Pro Lys Glu Gln	
320	325	330
Leu Thr Glu Glu Ala Arg Glu Gly Ile	Lys Gln Leu Leu Lys Gln	
335	340	345
Gly Ser Val Gln Lys Val Tyr Asn Gly	Leu Gln Gly Tyr	
350	355	

<210> 149  
 <211> 509  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445, 482  
 <223> unknown base

<400> 149  
 tgggaccagg gaaccccggtg ccccccggtg gagngcctaa caggccggtg 50  
 gntgcgaccg aagcggcggtg cggaggaggt tttgaggatt tttggaacag 100  
 gaccgcgaca gaggaaccat ggttccgcag aacntgagca cnttttgcct 150  
 gttgntgnta tactttcatcg gggcggtgat tgccggacga gatttntata 200  
 agattttggg gtgcctngaa gtgccttnta taaaggatat taaaaaggcc 250  
 tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300  
 acaagcccag gagaaattcc aggatttggg tgctgcttat gaggttntgt 350  
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400  
 aaagatggtn atcagagctc ccatggagac attttttcac acttntttgg 450  
 ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500  
 ttccaagag 509

<210> 150  
 <211> 1532  
 <212> DNA  
 <213> Homo sapiens



<400> 150

ggcacgagggc ggcggggcag tcgcgggatg cgcccgggag ccacagcctg 50  
aggccctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100  
ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150  
gaccgggact gagtcaggag cctctcggaa gcatggagac tgtggtgatt 200  
gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250  
ggtgctggtt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300  
gctatgattc taagcccatt gtggacctca ttggtgccat ggagaccag 350  
tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccca 400  
cattgaggcc attctggaga atgaagactg gatcgaagat gcctcgggtc 450  
tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500  
aagcttggtt ccatgacaat gggctctggg gccaaagatga agacttcagc 550  
cagtgtcagc gacatcattg tggtagccaa gcggatcagc cccagggtgg 600  
atgatgttgt gaagtcgatg taccctccgt tggaccccaa actcctggac 650  
gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgetggtgac 700  
aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750  
tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800  
tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850  
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cgccatccct ggatggctca gcttagcctt ctactttttc ctatagagtt 950  
agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaagcag 1000  
gagatccccg tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050  
gagtggcagt ctaatactac agttagggga gatgccattc actctctgca 1100  
agaggagtat tgaaaactgg tggactgtca gctttattta gctcacctag 1150  
tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200  
taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250  
ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300  
tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350  
tgtattatct gcctgggtccc tgaggcgtct gggctctctcc tctcccttgc 1400  
aggtttgggt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450

tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaattt 1500  
 atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151  
 <211> 226  
 <212> PRT  
 <213> Homo sapiens

<400> 151  
 Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile  
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 Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg  
                     20                    25                    30  
 Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro  
                     35                    40                    45  
 Ile Val Asp Leu Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser  
                     50                    55                    60  
 Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu  
                     65                    70                    75  
 Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu  
                     80                    85                    90  
 Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr  
                     95                    100                    105  
 Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys  
                     110                    115                    120  
 Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile  
                     125                    130                    135  
 Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu  
                     140                    145                    150  
 Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser  
                     155                    160                    165  
 Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr  
                     170                    175                    180  
 Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu  
                     185                    190                    195  
 His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp  
                     200                    205                    210  
 Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala  
                     215                    220                    225

Ile

<210> 152  
<211> 1027  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1017, 1020  
<223> unknown base

<400> 152  
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tcgccgctgt cccaccact gcagccatga tctccttaac ggacacgcag 100  
aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttctttgg 150  
aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200  
ttgtagccgg cttggctttt gtaattgggt tagaaagaac attcagattc 250  
ttcttccaaa aacataaaat gaaagctaca ggtttttttc tgggtggtgt 300  
atgtgtagtc cttattgggt ggcctttgat aggcattgatc ttcgaaattt 350  
atggattttt tctctgttgc aggggcttct ttcctgtcgt tgttggttt 400  
attagaagag tgccagtcct tggatccctc cttaaatttac ctggaattag 450  
atcatttgta gataaagttg gagaaagcaa caatatggta taacaacaag 500  
tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550  
agaatattca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600  
tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650  
aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700  
caagcaaact gagagaggtg aaatccatgt taatgatgct taagaaactc 750  
ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800  
ttagagaact gtggtgcctg tttcttttct ttttattttg aaggctcagg 850  
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<210> 153  
<211> 138  
<212> PRT  
<213> Homo sapiens

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 <221> N-myristoylation Sites  
 <222> 11-16, 51-56 and 116-121  
 <223> N-myristoylation Sites.

<220>  
 <221> Transmembrane domains  
 <222> 12-30, 33-52, 69-89 and 93-109  
 <223> Transmembrane domains

<220>  
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 <222> 49-59  
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

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                     35                    40                    45  
  
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe  
                     50                    55                    60  
  
 Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val  
                     65                    70                    75  
  
 Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu  
                     80                    85                    90  
  
 Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val  
                     95                    100                    105  
  
 Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn  
                     110                    115                    120  
  
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 <212> DNA  
 <213> Homo sapiens

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<211> 1781

<212> DNA

<213> Homo sapiens

<400> 155

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<210> 156

<211> 378

<212> PRT

<213> Homo sapiens

<400> 156

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				20					25					30
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu
				35					40					45
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln
				50					55					60
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile
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Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala

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Trp Ser Leu Ser Glu Arg Phe Gly Leu	Leu Gly Gly Ser Lys Val		
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Leu Ala Lys Lys Glu Leu Ala Tyr Val	Pro Ile Ile Gly Trp Met		
125	130	135	
Trp Tyr Phe Thr Glu Met Val Phe Cys	Ser Arg Lys Trp Glu Gln		
140	145	150	
Asp Arg Lys Thr Val Ala Thr Ser Leu	Gln His Leu Arg Asp Tyr		
155	160	165	
Pro Glu Lys Tyr Phe Phe Leu Ile His	Cys Glu Gly Thr Arg Phe		
170	175	180	
Thr Glu Lys Lys His Glu Ile Ser Met	Gln Val Ala Arg Ala Lys		
185	190	195	
Gly Leu Pro Arg Leu Lys His His Leu	Leu Pro Arg Thr Lys Gly		
200	205	210	
Phe Ala Ile Thr Val Arg Ser Leu Arg	Asn Val Val Ser Ala Val		
215	220	225	
Tyr Asp Cys Thr Leu Asn Phe Arg Asn	Asn Glu Asn Pro Thr Leu		
230	235	240	
Leu Gly Val Leu Asn Gly Lys Lys Tyr	His Ala Asp Leu Tyr Val		
245	250	255	
Arg Arg Ile Pro Leu Glu Asp Ile Pro	Glu Asp Asp Asp Glu Cys		
260	265	270	
Ser Ala Trp Leu His Lys Leu Tyr Gln	Glu Lys Asp Ala Phe Gln		
275	280	285	
Glu Glu Tyr Tyr Arg Thr Gly Thr Phe	Pro Glu Thr Pro Met Val		
290	295	300	
Pro Pro Arg Arg Pro Trp Thr Leu Val	Asn Trp Leu Phe Trp Ala		
305	310	315	
Ser Leu Val Leu Tyr Pro Phe Phe Gln	Phe Leu Val Ser Met Ile		
320	325	330	
Arg Ser Gly Ser Ser Leu Thr Leu Ala	Ser Phe Ile Leu Val Phe		
335	340	345	
Phe Val Ala Ser Val Gly Val Arg Trp	Met Ile Gly Val Thr Glu		
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Ile Asp Lys Gly Ser Ala Tyr Gly Asn	Ser Asp Ser Lys Gln Lys		
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Leu Asn Asp

<210> 157

<211> 1849

<212> DNA

<213> Homo sapiens

<400> 157

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<210> 158  
 <211> 409  
 <212> PRT  
 <213> Homo sapiens

<400> 158  
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 Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp  
 50 55 60  
 Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn  
 65 70 75  
 Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser  
 80 85 90  
 Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His  
 95 100 105  
 Ser Asp Gln Ile Met Thr Phe Arg Glu Arg Leu Leu His Lys Asn  
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 Leu Gln Glu His Phe Ser Asn Gln Asp Leu Val Phe Leu Leu Leu  
 125 130 135  
 Thr Pro Ser Ile Ile Thr Glu Ser Cys Ser Thr His Arg Leu Glu

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His Ser Leu Tyr	Lys Pro Gln Lys Gly	Leu Phe His Arg Val	Pro		
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Thr Val Ser Gly	Ser Cys Met Ser Thr	Gly Phe Ser Arg Ala	Val		
	185	190	195		
Gln Thr His Ser	Ser Lys Phe Phe Glu	Glu Asp Gly Ser Leu	Lys		
	200	205	210		
Glu Val His Lys	Ile Asn Glu Met Tyr	Ala Ser Leu Gln Glu	Glu		
	215	220	225		
Leu Lys Ser Ile	Cys Lys Lys Val Glu	Asp Ser Glu Gln Ala	Val		
	230	235	240		
Asp Lys Leu Val	Lys Asp Val Asn Arg	Leu Lys Arg Glu Ile	Glu		
	245	250	255		
Lys Arg Arg Gly	Ala Gln Ile Gln Ala	Ala Arg Glu Lys Asn	Ile		
	260	265	270		
Gln Lys Asp Pro	Gln Glu Asn Ile Phe	Leu Cys Gln Ala Leu	Arg		
	275	280	285		
Thr Phe Phe Pro	Asn Ser Glu Phe Leu	His Ser Cys Val Met	Ser		
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Leu Lys Asn Arg	His Val Ser Lys Ser	Ser Cys Asn Tyr Asn	His		
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His Leu Asp Val	Val Asp Asn Leu Thr	Leu Met Val Glu His	Thr		
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<210> 159  
 <211> 2651

<212> DNA  
<213> Homo sapiens

<400> 159

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<210> 160  
<211> 556  
<212> PRT  
<213> Homo sapiens

<400> 160

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Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys	50	55	60	
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr	65	70	75	
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln	80	85	90	
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe	95	100	105	
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu	110	115	120	
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn	125	130	135	
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr	140	145	150	
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp	155	160	165	
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr	170	175	180	
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu	185	190	195	
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln	200	205	210	
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu	215	220	225	
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Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala	350	355	360
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Thr	Ala	Ala	Gly	Thr	Ser	Leu	Asp	Arg	Leu	Val	Thr	Asp	Val	Lys	380	385	390
Glu	Lys	Leu	Lys	Gln	Ala	Lys	Lys	Phe	Trp	Ser	Ser	Leu	Pro	Ser	395	400	405
Asn	Val	Cys	Asn	Asp	Glu	Arg	Met	Ala	Ala	Gly	Asn	Gly	Asn	Glu	410	415	420
Asp	Asp	Cys	Trp	Asn	Gly	Lys	Gly	Lys	Ser	Arg	Tyr	Leu	Phe	Ala	425	430	435
Val	Thr	Gly	Asn	Gly	Leu	Ala	Asn	Gln	Gly	Asn	Asn	Pro	Glu	Val	440	445	450
Gln	Val	Asp	Thr	Ser	Lys	Pro	Asp	Ile	Leu	Ile	Leu	Arg	Gln	Ile	455	460	465
Met	Ala	Leu	Arg	Val	Met	Thr	Ser	Lys	Met	Lys	Asn	Ala	Tyr	Asn	470	475	480
Gly	Asn	Asp	Val	Asp	Phe	Phe	Asp	Ile	Ser	Asp	Glu	Ser	Ser	Gly	485	490	495
Glu	Gly	Ser	Gly	Ser	Gly	Cys	Glu	Tyr	Gln	Gln	Cys	Pro	Ser	Glu	500	505	510
Phe	Asp	Tyr	Asn	Ala	Thr	Asp	His	Ala	Gly	Lys	Ser	Ala	Asn	Glu	515	520	525
Lys	Ala	Asp	Ser	Ala	Gly	Val	Arg	Pro	Gly	Ala	Gln	Ala	Tyr	Leu	530	535	540
Leu	Thr	Val	Phe	Cys	Ile	Leu	Phe	Leu	Val	Met	Gln	Arg	Glu	Trp	545	550	555

Arg

<210> 161

<211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 161  
 ctccgtggta aacccacag ccc 23  
  
 <210> 162  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 162  
 tcacatcgat gggatccatg accg 24  
  
 <210> 163  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 163  
 ggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50  
  
 <210> 164  
 <211> 870  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 164  
 ctgccctca aatgggaacg ctggcctggg actaaagcat agaccaccag 50  
 gctgagtatc ctgacctgag tcatccccag ggatcaggag cctccagcag 100  
 ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150  
 cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200  
 atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250  
 ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300  
 gtgagtgcaa agattgggtc ctgagagccc cgagaagaaa attcatgaca 350  
 gtgtctgggc tgccaaagaa gcagtgcgcc tgtgatcatt tcaagggcaa 400  
 tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450  
 ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500

ctgcctttgt aggagctctg agcgcccact cttccaatta aacattctca 550  
gccaagaaga cagtgagcac acctaccaga cactcttctt ctcccacctc 600  
actctcccac tgtacccacc cctaaatcat tccagtgtc tcaaaaagca 650  
tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700  
cgtcagtctt agcctgtgcc ctccccttac ccaggcttag gcttaattac 750  
ctgaaagatt ccaggaaact gtagcttctt agctagtgtc atttaacctt 800  
aatgcaatc aggaaagtag caaacagaag tcaataaata tttttaaatg 850  
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165  
<211> 119  
<212> PRT  
<213> Homo sapiens

<400> 165  
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Leu Pro Leu Met  
1 5 10 15  
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg  
20 25 30  
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu  
35 40 45  
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro  
50 55 60  
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys  
65 70 75  
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln  
80 85 90  
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln  
95 100 105  
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu  
110 115

<210> 166  
<211> 551  
<212> DNA  
<213> Homo sapiens

<400> 166  
aatggctgtc ttagtacttc gctgacagt tgtcctggga ctgcttgtct 50  
tattcctgac ctgctatgca gacgacaaac cagacaagcc agacgacaag 100  
ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150



cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200  
ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250  
cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300  
tccaagagca gccaaatcct gcttttccag tttggctcca caagtcctcc 350  
aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400  
tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450  
ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500  
agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550  
a 551

<210> 167

<211> 87

<212> PRT

<213> Homo sapiens

<400> 167

Met	Ala	Val	Leu	Val	Leu	Arg	Leu	Thr	Val	Val	Leu	Gly	Leu	Leu
1				5					10				15	
Val	Leu	Phe	Leu	Thr	Cys	Tyr	Ala	Asp	Asp	Lys	Pro	Asp	Lys	Pro
				20					25				30	
Asp	Asp	Lys	Pro	Asp	Asp	Ser	Gly	Lys	Asp	Pro	Lys	Pro	Asp	Phe
				35					40				45	
Pro	Lys	Phe	Leu	Ser	Leu	Leu	Gly	Thr	Glu	Ile	Ile	Glu	Asn	Ala
				50					55				60	
Val	Glu	Phe	Ile	Leu	Arg	Ser	Met	Ser	Arg	Ser	Thr	Gly	Phe	Met
				65					70				75	
Glu	Phe	Asp	Asp	Asn	Glu	Gly	Lys	His	Ser	Ser	Lys			
				80					85					

<210> 168

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 168

ggacgccagc gcctgcagag gctgagcagg gaaaaagcca gtgccccagc 50  
ggaagcacag ctcagagctg gtctgccatg gacatcctgg tcccactcct 100  
gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150  
tgggctgctg gcagccctg tgcaaaagct acttcccta cctgatggcc 200  
gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250

cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300  
 tggagctggg ctgcggaacc ggagccaact ttcagttcta cccaccgggc 350  
 tgcaggggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400  
 aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtggtgg 450  
 ctcttgagga ggacatgaga cagctggctg atggctccat ggatgtggtg 500  
 gtctgcactc tgggtgctgtg ctctgtgcag agcccaagga aggtcctgca 550  
 ggaggtccgg agagtactga gaccgggagg tgtgctcttt ttctgggagc 600  
 atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650  
 gagcccacct ggaaacacat tggggatggc tgetgcctca ccagagagac 700  
 ctggaaggat cttgagaacg cccagttctc cgaaatccaa atggaacgac 750  
 agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaag 800  
 gctgtcaaac aatctttccc aagctccaag gcactcattt gtccttccc 850  
 cagcctccaa ttagaacaag ccaccacca gcctatctat cttccactga 900  
 gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950  
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tcccgccttc 1000  
 gacagtgaaa aagctctact tctacgtga cccagggagg aaacactagg 1050  
 accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100  
 gcctcccaat gttgtccctt tcttcgttc ccatggtaaa gtcctctctg 1150  
 ctttctctct gaggctacac ccatgcgtct ctaggaactg gtcacaaaag 1200  
 tcatggtgcc tgcacccctg ccaagcccc ctgacctct ctccccacta 1250  
 ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300  
 atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350  
 taataaatag acgaaaccac g 1371

<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

Met	Asp	Ile	Leu	Val	Pro	Leu	Leu	Gln	Leu	Leu	Val	Leu	Leu	Leu
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Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro
				20				25					30	

Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro	
				35					40					45	
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser	
				50					55					60	
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu	
				65					70					75	
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro	
				80					85					90	
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys	
				95					100					105	
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu	
				110					115					120	
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp	
				125					130					135	
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val	
				140					145					150	
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg	
				155					160					165	
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr	
				170					175					180	
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp	
				185					190					195	
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys	
				200					205					210	
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln	
				215					220					225	
Pro	Pro	Pro	Leu	Lys	Trp	Leu	Pro	Val	Gly	Pro	His	Ile	Met	Gly	
				230					235					240	
Lys	Ala	Val	Lys	Gln	Ser	Phe	Pro	Ser	Ser	Lys	Ala	Leu	Ile	Cys	
				245					250					255	
Ser	Phe	Pro	Ser	Leu	Gln	Leu	Glu	Gln	Ala	Thr	His	Gln	Pro	Ile	
				260					265					270	
Tyr	Leu	Pro	Leu	Arg	Gly	Thr									
				275											

<210> 170

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 170

gtgggattta tttgagtgc aatcggttt ctcagtggtg gtggaagttg 50

cctcatcgca ggcagatggt ggggctttgt ccgaacagct cccctctgcc 100  
agcttctgta gataaggggt aaaaactaat atttatatga cagaagaaaa 150  
agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgct 200  
ctcttcttac tggttttgca ccataacttc ctcagcttga gcagtttggt 250  
aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300  
ttgtcccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350  
cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400  
tataaacagc attcagcaca acactcgctc caatgtgatt ttctacattg 450  
ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500  
tcctgaaaa gcacagata caaaattgtc aattttgacc ctaaactttt 550  
ggaaggaaaa gttaaaggagg atcctgacca gggggaatcc atgaaacctt 600  
taacctttgc aaggttctac ttgccaatte tggttcccag cgcaaagaag 650  
gccatataca tggatgatga tgtaattgtg caagggtgata ttcttgccct 700  
ttacaatata gcactgaagc caggacatgc agctgcattt tcagaagatt 750  
gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800  
aattacattg gctatcttga ctataaaaag gaaagaatcc gtaagctttc 850  
catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaacc 900  
tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950  
aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000  
cacaacacct cctctgctta tcgtatttta tcaacagcac tctaccatcg 1050  
atcctatgtg gaatgtccgc caccttggtt ccagtgtctg aaaacgatat 1100  
tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150  
gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggg 1200  
atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250  
atctcaaaca taaagtgaaa cagaatttga actgtaagca agcattttctc 1300  
aggaagtccct ggaagatagc atgcatggga agtaacagtt gctaggcttc 1350  
aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400  
atgacaaact gccctgtctg gcagtcagct tcccagacag actatagact 1450  
ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500

aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550  
 taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gcctgatctg 1600  
 taaataaaaac ttacattttt c 1621

<210> 171  
 <211> 371  
 <212> PRT  
 <213> Homo sapiens

<400> 171  
 Met Ser Phe Arg Lys Val Asn Ile Ile Ile Leu Val Leu Ala Val  
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 Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser  
 20 25 30  
 Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro  
 35 40 45  
 Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp  
 50 55 60  
 Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp  
 65 70 75  
 Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn  
 80 85 90  
 Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr  
 95 100 105  
 Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser  
 110 115 120  
 Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly  
 125 130 135  
 Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu  
 140 145 150  
 Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys  
 155 160 165  
 Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile  
 170 175 180  
 Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala  
 185 190 195  
 Phe Ser Glu Asp Cys Asp Ser Ala Ser Thr Lys Val Val Ile Arg  
 200 205 210  
 Gly Ala Gly Asn Gln Tyr Asn Tyr Ile Gly Tyr Leu Asp Tyr Lys  
 215 220 225  
 Lys Glu Arg Ile Arg Lys Leu Ser Met Lys Ala Ser Thr Cys Ser

	230		235		240
Phe Asn Pro Gly	Val	Phe Val Ala Asn	Leu Thr Glu Trp Lys	Arg	
	245		250		255
Gln Asn Ile Thr	Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn	Val		
	260		265		270
Glu Glu Gly Leu	Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr	Thr		
	275		280		285
Pro Pro Leu Leu	Ile Val Phe Tyr Gln	Gln His Ser Thr Ile	Asp		
	290		295		300
Pro Met Trp Asn	Val Arg His Leu Gly	Ser Ser Ala Gly Lys	Arg		
	305		310		315
Tyr Ser Pro Gln	Phe Val Lys Ala Ala	Lys Leu Leu His Trp	Asn		
	320		325		330
Gly His Leu Lys	Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp	Val		
	335		340		345
Trp Glu Lys Trp	Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn	Leu		
	350		355		360
Ile Arg Arg Tyr	Thr Glu Ile Ser Asn	Ile Lys			
	365		370		

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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aggttacaga ttcaggaatt ntaggncctc aacctntaga ntttgtccca 100

aatgttctcc gacatgcagt agatgggaga caagaggaga ttctgtggt 150

catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200

gcattcagca caacactcgn tccaatgtga ttttctacat tgttactctc 250

aacaatacag cagaccatnt ccggtcctgg ntcaacagtg attccctgaa 300

aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac caggggggaat ccatgaaacc tttaaccttt 400

gcaaggttct acttgccaat tctggttccc agcgcaaaga aggccatata 450

catggatgat gatgtaattg tgcaaggtga tattcttgcc ctttacaata 500  
cagcactgaa gccaggacat gcagctgcat tttcagaaga ttgtgattca 550  
gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173

<211> 1866

<212> DNA

<213> *Homo sapiens*

<400> 173

cgacgctcta gcggttaccg ctgcgggctg gctgggcgta gtggggctgc 50  
gcggctgcca cggagctaga gggcaagtgt gctcggccca gcgtgcaggg 100  
aacgcgggcg gccagacaac gggctgggct ccggggcctg cggcgcgggc 150  
gctgagctgg cagggcgggt cggggcgcggt gctgcatccg catctcctcc 200  
atcgctgca gtaagggcgg ccgcggcgag cctttgaggg gaacgacttg 250  
tcggagccct aaccaggggt gtctctgagc ctggtgggat ccccgagcgg 300  
tcacatcact ttccgatcac ttcaaagtgg ttaaaaacta atatttatat 350  
gacagaagaa aaagatgtca ttccgtaaag taaacatcat catcttggtc 400  
ctgggctgtt gctctcttct tactggtttt gcaccataac ttcctcagct 450  
tgaggcagtt tgttaaggaa tgaggttaca gattcaggaa ttgtagggcc 500  
tcaacctata ggactttgtc ccaaagtctc tcogacatgc agtagatggg 550  
agacaagagg agattcctgt ggtcatcgct gcattctgaag acaggcttgg 600  
gggggccatt gcagctataa acagcattca gcacaacact cgctccaatg 650  
tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700  
tgggctcaac agtgattccc tgaaaagcat cagatacaaa attgtcaatt 750  
ttgaccctaa acttttggaa ggaaaagtaa aggaggatcc tgaccagggg 800  
gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850  
ttcccagcgc aaagaaggcc atatacatgg atgatgatgt aattgtgcaa 900  
ggtgatattc ttgcccttta caatacagca ctgaagccag gacatgcagc 950  
tgcattttca gaagattgtg attcagcctc tactaaagtt gtcattccgtg 1000  
gagcaggaaa ccagtacaat tacattgggt atcttgacta taaaaaggaa 1050  
agaattcgta agctttccat gaaagccagc acttgctcat ttaatcctgg 1100  
agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150

aactggaaaa atggatgaaa ctcaatgtag aagaggggact gtatagcaga 1200  
accctggctg gtagcatcac aacacctcct ctgcttatcg tattttatca 1250  
acagcactct accatcgatc ctatgtggaa tgtccgccac cttgggtcca 1300  
gtgctggaaa acgatattca cctcagtttg taaaggctgc caagttactc 1350  
cattggaatg gacatttgaa gccatgggga aggactgctt catatactga 1400  
tgtttgggga aaaatggtat attccagacc caacaggcaa attcaaccta 1450  
atccgaagat ataccgagat ctcaaacata aagtgaaca gaatttgaac 1500  
tgtaagcaag cattttctcag gaagtcctgg aagatagcat gcgtgggaag 1550  
taacagtgc taggcttcaa tgcctatcgg tagcaagcca tggaaaaaga 1600  
tgtgtcagct aggtaaagat gacaaaactgc cctgtctggc agtcagcttc 1650  
ccagacagac tatagactat aaatatgtct ccatctgcct taccaagtgt 1700  
tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750  
tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800  
aacctgtggc ctgatctgta aataaaaactt acatttttca ataggtaaaa 1850  
aaaaaaaaa aaaaaa 1866

<210> 174

<211> 823

<212> DNA

<213> Homo sapiens

<400> 174

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ctcaccattg aggcagctcc actgtctgtg ctgggtctgag ggtgctgcct 150  
gtcatggggg cagccatctc ccaggggggc ctcacgccca tcgtctgcaa 200  
cggctctcgtg ggcttcttgc tgctgctgct ctgggtcacc ctctgctggg 250  
cctgccattc tcgtctgccg acgttgactc tctctctgaa tccagtccca 300  
actccagccc tggcccctgt cctgagaagg cccaccacc ccagaagccc 350  
agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400  
tggagcccag gacctaatgc cacctcacct agagcctgga attaggatcc 450  
cagagttcag ccagcctggg gtccagaact caagagtccg cctgcttgga 500  
gctggaccca gcggcccaga gtctagccag cttgggtcca ataggagctc 550



agtggcccta aggagatggg cctgggggtgg gggcttatga gttggtgcta 600  
 gagccagggc catctggact atgtccatc ccaagggcca agggtcaggg 650  
 gccgggtcca ctctttccct aggctgagca cctctaggcc ctctagggtg 700  
 gggaagcaaaa ctggaacca tggcaataat aggaggggtgt ccaggctggg 750  
 cccctcccct ggtcctccca gtgtttgctg gataataaat ggaactatgg 800  
 ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

Met	Gly	Ala	Ala	Ile	Ser	Gln	Gly	Ala	Leu	Ile	Ala	Ile	Val	Cys
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Asn	Gly	Leu	Val	Gly	Phe	Leu	Leu	Leu	Leu	Leu	Trp	Val	Ile	Leu
				20					25				30	
Cys	Trp	Ala	Cys	His	Ser	Arg	Leu	Pro	Thr	Leu	Thr	Leu	Ser	Leu
				35					40				45	
Asn	Pro	Val	Pro	Thr	Pro	Ala	Leu	Ala	Pro	Val	Leu	Arg	Arg	Pro
				50					55				60	
His	His	Pro	Arg	Ser	Pro	Ala	Met	Lys	Ala	Ala	Thr	Cys	Cys	Ser
				65					70				75	
Pro	Glu	Gly	Pro	Trp	Pro	Ser	Leu	Glu	Pro	Arg	Thr			
				80					85					

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

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 atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200  
 gatacaatcc ttggcctgtg taccctcgca ttagccttgt ctttggccat 250  
 gatgtttacc ttcagattca tcaccacct tctgggtcac attttcattt 300  
 cattgggttat tttgggattg ttgtttgtct gcgggtgttt atgggtggtg 350  
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 gttgagcttt tccaaatcac aaataaagcc atcagcagtg ctcccttct 550  
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 agaagtaaaa atgatcctcc tgatcatccc atcctttcgt ctctctccat 850  
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 aaagaacagc agcatgggtgc attgtccagg tacctgttcc gatgtgtcta 1000  
 ctgtgttttc tgggtgtcttg acaaatacct gctccatctc aaccagaatg 1050  
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 ctgctttgga gacttcataa tttttctagg aaagggtgta gtggtgtgtt 1200  
 tcaactgttt tggaggactc atggctttta actacaatcg ggcattccag 1250  
 gtgtgggcag tccctctggt attggtagct ttttttgcct acttagtagc 1300  
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350  
 gttttgctgt tgatctggaa acaaatgatg gatcgtcaga aaagccctac 1400  
 tttatggatc aagaatttct gagtttcgta aaaaggagca acaattaaa 1450  
 caatgcaagg gcacagcagg acaagcactc attaaggaat gaggaggga 1500  
 cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550  
 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600  
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 ttcctcaaaa 1660

<210> 177  
 <211> 445  
 <212> PRT  
 <213> Homo sapiens  
 <400> 177

Met	Ser	Gly	Arg	Asp	Thr	Ile	Leu	Gly	Leu	Cys	Ile	Leu	Ala	Leu	1	5	10	15
Ala	Leu	Ser	Leu	Ala	Met	Met	Phe	Thr	Phe	Arg	Phe	Ile	Thr	Thr	20	25	30	
Leu	Leu	Val	His	Ile	Phe	Ile	Ser	Leu	Val	Ile	Leu	Gly	Leu	Leu	35	40	45	
Phe	Val	Cys	Gly	Val	Leu	Trp	Trp	Leu	Tyr	Tyr	Asp	Tyr	Thr	Asn	50	55	60	
Asp	Leu	Ser	Ile	Glu	Leu	Asp	Thr	Glu	Arg	Glu	Asn	Met	Lys	Cys	65	70	75	
Val	Leu	Gly	Phe	Ala	Ile	Val	Ser	Thr	Gly	Ile	Thr	Ala	Val	Leu	80	85	90	
Leu	Val	Leu	Ile	Phe	Val	Leu	Arg	Lys	Arg	Ile	Lys	Leu	Thr	Val	95	100	105	
Glu	Leu	Phe	Gln	Ile	Thr	Asn	Lys	Ala	Ile	Ser	Ser	Ala	Pro	Phe	110	115	120	
Leu	Leu	Phe	Gln	Pro	Leu	Trp	Thr	Phe	Ala	Ile	Leu	Ile	Phe	Phe	125	130	135	
Trp	Val	Leu	Trp	Val	Ala	Val	Leu	Leu	Ser	Leu	Gly	Thr	Ala	Gly	140	145	150	
Ala	Ala	Gln	Val	Met	Glu	Gly	Gly	Gln	Val	Glu	Tyr	Lys	Pro	Leu	155	160	165	
Ser	Gly	Ile	Arg	Tyr	Met	Trp	Ser	Tyr	His	Leu	Ile	Gly	Leu	Ile	170	175	180	
Trp	Thr	Ser	Glu	Phe	Ile	Leu	Ala	Cys	Gln	Gln	Met	Thr	Ile	Ala	185	190	195	
Gly	Ala	Val	Val	Thr	Cys	Tyr	Phe	Asn	Arg	Ser	Lys	Asn	Asp	Pro	200	205	210	
Pro	Asp	His	Pro	Ile	Leu	Ser	Ser	Leu	Ser	Ile	Leu	Phe	Phe	Tyr	215	220	225	
His	Gln	Gly	Thr	Val	Val	Lys	Gly	Ser	Phe	Leu	Ile	Ser	Val	Val	230	235	240	
Arg	Ile	Pro	Arg	Ile	Ile	Val	Met	Tyr	Met	Gln	Asn	Ala	Leu	Lys	245	250	255	
Glu	Gln	Gln	His	Gly	Ala	Leu	Ser	Arg	Tyr	Leu	Phe	Arg	Cys	Cys	260	265	270	
Tyr	Cys	Cys	Phe	Trp	Cys	Leu	Asp	Lys	Tyr	Leu	Leu	His	Leu	Asn	275	280	285	
Gln	Asn	Ala	Tyr	Thr	Thr	Thr	Ala	Ile	Asn	Gly	Thr	Asp	Phe	Cys				

	290		295		300
Thr Ser Ala Lys Asp Ala Phe Lys Ile Leu Ser Lys Asn Ser Ser	305		310		315
His Phe Thr Ser Ile Asn Cys Phe Gly Asp Phe Ile Ile Phe Leu	320		325		330
Gly Lys Val Leu Val Val Cys Phe Thr Val Phe Gly Gly Leu Met	335		340		345
Ala Phe Asn Tyr Asn Arg Ala Phe Gln Val Trp Ala Val Pro Leu	350		355		360
Leu Leu Val Ala Phe Phe Ala Tyr Leu Val Ala His Ser Phe Leu	365		370		375
Ser Val Phe Glu Thr Val Leu Asp Ala Leu Phe Leu Cys Phe Ala	380		385		390
Val Asp Leu Glu Thr Asn Asp Gly Ser Ser Glu Lys Pro Tyr Phe	395		400		405
Met Asp Gln Glu Phe Leu Ser Phe Val Lys Arg Ser Asn Lys Leu	410		415		420
Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu	425		430		435
Glu Gly Thr Glu Leu Gln Ala Ile Val Arg	440		445		

<210> 178  
 <211> 2773  
 <212> DNA  
 <213> Homo sapiens

<400> 178  
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 aagggaaaaa gaatattcat tctgtgtggt gaaaattttt tgaaaaaaa 150  
 attgccttct tcaaacaagg gtgtcattct gatatttatg aggactgttg 200  
 ttctcactat gaaggcatct gttattgaaa tggtccttgt tttgctggtg 250  
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 catgtttatg gcactgacgt gtatgcatcc tactccagtg tgtgtggcgc 450  
 tgccgtacac agtgggtgtgc ttgataattc aggagggaaa atacttggtc 500

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 aaactgcaaa attgacttgt cgtttttaat tgatgggagc accagcattg 1100  
 gcaaacggcg attccgaatc cagaagcagc tcctggctga tgttgcccaa 1150  
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<210> 179

<211> 678

<212> PRT

<213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met
1				5					10				15	
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr
				20					25				30	
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn
				35					40				45	
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val
				50					55				60	
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly
				65					70				75	
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val
				80					85				90	

His Ser Gly Val	Leu Asp Asn Ser Gly	Gly Lys Ile Leu Val Arg	95	100	105
Lys Val Ala Gly	Gln Ser Gly Tyr Lys	Gly Ser Tyr Ser Asn Gly	110	115	120
Val Gln Ser Leu	Ser Leu Pro Arg Trp	Arg Glu Ser Phe Ile Val	125	130	135
Leu Glu Ser Lys	Pro Lys Lys Gly Val	Thr Tyr Pro Ser Ala Leu	140	145	150
Thr Tyr Ser Ser	Ser Lys Ser Pro Ala	Ala Gln Ala Gly Glu Thr	155	160	165
Thr Lys Ala Tyr	Gln Arg Pro Pro Ile	Pro Gly Thr Thr Ala Gln	170	175	180
Pro Val Thr Leu	Met Gln Leu Leu Ala	Val Thr Val Ala Val Ala	185	190	195
Thr Pro Thr Thr	Leu Pro Arg Pro Ser	Pro Ser Ala Ala Ser Thr	200	205	210
Thr Ser Ile Pro	Arg Pro Gln Ser Val	Gly His Arg Ser Gln Glu	215	220	225
Met Asp Leu Trp	Ser Thr Ala Thr Tyr	Thr Ser Ser Gln Asn Arg	230	235	240
Pro Arg Ala Asp	Pro Gly Ile Gln Arg	Gln Asp Pro Ser Gly Ala	245	250	255
Ala Phe Gln Lys	Pro Val Gly Ala Asp	Val Ser Leu Gly Leu Val	260	265	270
Pro Lys Glu Glu	Leu Ser Thr Gln Ser	Leu Glu Pro Val Ser Leu	275	280	285
Gly Asp Pro Asn	Cys Lys Ile Asp Leu	Ser Phe Leu Ile Asp Gly	290	295	300
Ser Thr Ser Ile	Gly Lys Arg Arg Phe	Arg Ile Gln Lys Gln Leu	305	310	315
Leu Ala Asp Val	Ala Gln Ala Leu Asp	Ile Gly Pro Ala Gly Pro	320	325	330
Leu Met Gly Val	Val Gln Tyr Gly Asp	Asn Pro Ala Thr His Phe	335	340	345
Asn Leu Lys Thr	His Thr Asn Ser Arg	Asp Leu Lys Thr Ala Ile	350	355	360
Glu Lys Ile Thr	Gln Arg Gly Gly Leu	Ser Asn Val Gly Arg Ala	365	370	375
Ile Ser Phe Val	Thr Lys Asn Phe Phe	Ser Lys Ala Asn Gly Asn			

	380		385		390
Arg Ser Gly Ala	Pro Asn Val Val Val	Val Met Val Asp Gly Trp			
	395	400			405
Pro Thr Asp Lys	Val Glu Glu Ala Ser	Arg Leu Ala Arg Glu Ser			
	410	415			420
Gly Ile Asn Ile	Phe Phe Ile Thr Ile	Glu Gly Ala Ala Glu Asn			
	425	430			435
Glu Lys Gln Tyr	Val Val Glu Pro Asn	Phe Ala Asn Lys Ala Val			
	440	445			450
Cys Arg Thr Asn	Gly Phe Tyr Ser Leu	His Val Gln Ser Trp Phe			
	455	460			465
Gly Leu His Lys	Thr Leu Gln Pro Leu	Val Lys Arg Val Cys Asp			
	470	475			480
Thr Asp Arg Leu	Ala Cys Ser Lys Thr	Cys Leu Asn Ser Ala Asp			
	485	490			495
Ile Gly Phe Val	Ile Asp Gly Ser Ser	Ser Val Gly Thr Gly Asn			
	500	505			510
Phe Arg Thr Val	Leu Gln Phe Val Thr	Asn Leu Thr Lys Glu Phe			
	515	520			525
Glu Ile Ser Asp	Thr Asp Thr Arg Ile	Gly Ala Val Gln Tyr Thr			
	530	535			540
Tyr Glu Gln Arg	Leu Glu Phe Gly Phe	Asp Lys Tyr Ser Ser Lys			
	545	550			555
Pro Asp Ile Leu	Asn Ala Ile Lys Arg	Val Gly Tyr Trp Ser Gly			
	560	565			570
Gly Thr Ser Thr	Gly Ala Ala Ile Asn	Phe Ala Leu Glu Gln Leu			
	575	580			585
Phe Lys Lys Ser	Lys Pro Asn Lys Arg	Lys Leu Met Ile Leu Ile			
	590	595			600
Thr Asp Gly Arg	Ser Tyr Asp Asp Val	Arg Ile Pro Ala Met Ala			
	605	610			615
Ala His Leu Lys	Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp			
	620	625			630
Ala Ala Gln Glu	Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg			
	635	640			645
Asp His Ser Phe	Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr			
	650	655			660
Val Pro Arg Ile	Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln			
	665	670			675



Pro Arg Asn

<210> 180

<211> 1759

<212> DNA

<213> Homo sapiens

<400> 180

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gcgctgctgc ctcagcacca tggcgcgcca ggtcccgcgc gctccgcgcc 150  
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agaaggctgg ggtggaagta gaggctggat ggccctgttc cgggcctctc 400  
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gcaggcatcg gggctggcgt ggactcctac tttgagtact tggtgaaagg 750  
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tgaaatacct ctacctcctg ttgacccaa ccaacttcat ccacaacaat 1300  
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 ggctggggggg tacatcttca acacagaagc tcaccccatc gaccttgccg 1400  
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<210> 181

<211> 541

<212> PRT

<213> Homo sapiens

<400> 181

Met	Pro	Phe	Arg	Leu	Leu	Ile	Pro	Leu	Gly	Leu	Leu	Cys	Ala	Leu	1	5	10	15
Leu	Pro	Gln	His	His	Gly	Ala	Pro	Gly	Pro	Asp	Gly	Ser	Ala	Pro	20	25	30	
Asp	Pro	Ala	His	Tyr	Ser	Phe	Ser	Leu	Thr	Leu	Ile	Asp	Ala	Leu	35	40	45	
Asp	Thr	Leu	Leu	Ile	Leu	Gly	Asn	Val	Ser	Glu	Phe	Gln	Arg	Val	50	55	60	
Val	Glu	Val	Leu	Gln	Asp	Ser	Val	Asp	Phe	Asp	Ile	Asp	Val	Asn	65	70	75	
Ala	Ser	Val	Phe	Glu	Thr	Asn	Ile	Arg	Val	Val	Gly	Gly	Leu	Leu	80	85	90	
Ser	Ala	His	Leu	Leu	Ser	Lys	Lys	Ala	Gly	Val	Glu	Val	Glu	Ala	95	100	105	
Gly	Trp	Pro	Cys	Ser	Gly	Pro	Leu	Leu	Arg	Met	Ala	Glu	Glu	Ala	110	115	120	
Ala	Arg	Lys	Leu	Leu	Pro	Ala	Phe	Gln	Thr	Pro	Thr	Gly	Met	Pro	125	130	135	
Tyr	Gly	Thr	Val	Asn	Leu	Leu	His	Gly	Val	Asn	Pro	Gly	Glu	Thr	140	145	150	

Pro Val Thr Cys Thr Ala Gly Ile Gly Thr Phe Ile Val Glu Phe	155	160	165
Ala Thr Leu Ser Ser Leu Thr Gly Asp Pro Val Phe Glu Asp Val	170	175	180
Ala Arg Val Ala Leu Met Arg Leu Trp Glu Ser Arg Ser Asp Ile	185	190	195
Gly Leu Val Gly Asn His Ile Asp Val Leu Thr Gly Lys Trp Val	200	205	210
Ala Gln Asp Ala Gly Ile Gly Ala Gly Val Asp Ser Tyr Phe Glu	215	220	225
Tyr Leu Val Lys Gly Ala Ile Leu Leu Gln Asp Lys Lys Leu Met	230	235	240
Ala Met Phe Leu Glu Tyr Asn Lys Ala Ile Arg Asn Tyr Thr Arg	245	250	255
Phe Asp Asp Trp Tyr Leu Trp Val Gln Met Tyr Lys Gly Thr Val	260	265	270
Ser Met Pro Val Phe Gln Ser Leu Glu Ala Tyr Trp Pro Gly Leu	275	280	285
Gln Ser Leu Ile Gly Asp Ile Asp Asn Ala Met Arg Thr Phe Leu	290	295	300
Asn Tyr Tyr Thr Val Trp Lys Gln Phe Gly Gly Leu Pro Glu Phe	305	310	315
Tyr Asn Ile Pro Gln Gly Tyr Thr Val Glu Lys Arg Glu Gly Tyr	320	325	330
Pro Leu Arg Pro Glu Leu Ile Glu Ser Ala Met Tyr Leu Tyr Arg	335	340	345
Ala Thr Gly Asp Pro Thr Leu Leu Glu Leu Gly Arg Asp Ala Val	350	355	360
Glu Ser Ile Glu Lys Ile Ser Lys Val Glu Cys Gly Phe Ala Thr	365	370	375
Ile Lys Asp Leu Arg Asp His Lys Leu Asp Asn Arg Met Glu Ser	380	385	390
Phe Phe Leu Ala Glu Thr Val Lys Tyr Leu Tyr Leu Leu Phe Asp	395	400	405
Pro Thr Asn Phe Ile His Asn Asn Gly Ser Thr Phe Asp Ala Val	410	415	420
Ile Thr Pro Tyr Gly Glu Cys Ile Leu Gly Ala Gly Gly Tyr Ile	425	430	435
Phe Asn Thr Glu Ala His Pro Ile Asp Leu Ala Ala Leu His Cys			

	440		445		450									
Cys	Gln	Arg	Leu	Lys	Glu	Glu	Gln	Trp	Glu	Val	Glu	Asp	Leu	Met
	455				460								465	
Arg	Glu	Phe	Tyr	Ser	Leu	Lys	Arg	Ser	Arg	Ser	Lys	Phe	Gln	Lys
	470						475						480	
Asn	Thr	Val	Ser	Ser	Gly	Pro	Trp	Glu	Pro	Pro	Ala	Arg	Pro	Gly
	485							490					495	
Thr	Leu	Phe	Ser	Pro	Glu	Asn	His	Asp	Gln	Ala	Arg	Glu	Arg	Lys
	500							505					510	
Pro	Ala	Lys	Gln	Lys	Val	Pro	Leu	Leu	Ser	Cys	Pro	Ser	Gln	Pro
	515							520					525	
Phe	Thr	Ser	Lys	Leu	Ala	Leu	Leu	Gly	Gln	Val	Phe	Leu	Asp	Ser
	530							535					540	
Ser														

<210> 182  
 <211> 2056  
 <212> DNA  
 <213> Homo sapiens

<400> 182  
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 catctggggtt tgggcagaaa ggaggggtgct tcggagcccg ccctttctga 100  
 gcttctctggg ccggtcttag aacaattcag gcttcgctgc gactcagacc 150  
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200  
 gctttatttt ggaaagaaac aatgttctag gtcaaactga gtctaccaa 250  
 tgcagacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300  
 tgggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350  
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agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950  
gtaacatgtg catgtttgtt gtgctccttt tttctgttgg taaagtacag 2000  
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aaaaaa 2056

<210> 183  
<211> 311  
<212> PRT  
<213> Homo sapiens

<220>  
 <221> Signal peptide  
 <222> 1-29  
 <223> Signal peptide

<220>  
 <221> N-glycosylation sites  
 <222> 40-43, 134-137  
 <223> N-glycosylation sites.

<220>  
 <221> Tissue factor proteins homology  
 <222> 92-119  
 <223> Tissue factor proteins homology

<220>  
 <221> Transmembrane domain  
 <222> 230-255  
 <223> Transmembrane domain

<220>  
 <221> Integrins alpha chain protein homology  
 <222> 232-262  
 <223> Integrins alpha chain protein homology

<400> 183

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Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp
				20				25					30	
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
				35				40					45	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro
				50				55					60	
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu
				65				70					75	
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser
				80				85					90	
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala
				95				100					105	
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln
				110				115					120	
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser
				125				130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe
				140				145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe
				155				160					165	

Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	
Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	
				230					235					240	
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	
				245					250					255	
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	
				260					265					270	
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	
				275					280					285	
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	
				290					295					300	
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					
				305					310						

<210> 184  
 <211> 808  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 654, 711, 748  
 <223> unknown base

<400> 184  
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 tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150  
 agaatgcttt attttgaaa gaaacaatgt tctaggtcaa actgagtcta 200  
 ccaaatgcag actttcacia tggttctaga agaaatctgg acaagtcttt 250  
 tcatgtggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300  
 gccattctgc ctgccctca gaacctctct gtactctcaa ccaacatgaa 350  
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400  
 attctgtcga ataccagggg gactacgaga gcctgtacac gagccacatc 450

tggatcccca gcagctggtg ctcaactcact gaaggtcctg agtgtgatgt 500  
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggcca 550  
 cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600  
 agaaactcaa ccatacttac ccgacctggg atggagatca ccaaagatgg 650  
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700  
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750  
 gaacccttg cggccgctgg ggtatctctc gagaaaagag aggccaata 800  
 tgaccac 808

<210> 185  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 185  
 aggcttcgct gcgactagac ctc 23

<210> 186  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 186  
 ccaggtcggg taaggatggt tgag 24

<210> 187  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 187  
 tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188  
 <211> 1227  
 <212> DNA  
 <213> Homo sapiens

<400> 188  
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 ggcagcggcg tggctgctcc tgtgggctgc ggctgcgcg cagcaggagc 100



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aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctgggccc ccaccacttt aacgtgtctg ccttccctg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgccgcgcg 350
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggta 400
ctggtgcca tcctgccttc aagtacctgg ccagacttc tgggaaggag 450
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caaaggttta gttgttggtta tttcctctgt attattttct tcattacaaa 1150
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taaaaatgaa agtatcctcc tcaaaaa 1227

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<210> 189

<211> 187

<212> PRT

<213> Homo sapiens

<400> 189

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Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala
      20             25             30

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Val	Asn	Ile	Arg	Gly	Lys	Leu	Val	Ser	Leu	Glu	Lys	Tyr	Arg	Gly	
				35					40					45	
Ser	Val	Ser	Leu	Val	Val	Asn	Val	Ala	Ser	Glu	Cys	Gly	Phe	Thr	
				50					55					60	
Asp	Gln	His	Tyr	Arg	Ala	Leu	Gln	Gln	Leu	Gln	Arg	Asp	Leu	Gly	
				65					70					75	
Pro	His	His	Phe	Asn	Val	Leu	Ala	Phe	Pro	Cys	Asn	Gln	Phe	Gly	
				80					85					90	
Gln	Gln	Glu	Pro	Asp	Ser	Asn	Lys	Glu	Ile	Glu	Ser	Phe	Ala	Arg	
				95					100					105	
Arg	Thr	Tyr	Ser	Val	Ser	Phe	Pro	Met	Phe	Ser	Lys	Ile	Ala	Val	
				110					115					120	
Thr	Gly	Thr	Gly	Ala	His	Pro	Ala	Phe	Lys	Tyr	Leu	Ala	Gln	Thr	
				125					130					135	
Ser	Gly	Lys	Glu	Pro	Thr	Trp	Asn	Phe	Trp	Lys	Tyr	Leu	Val	Ala	
				140					145					150	
Pro	Asp	Gly	Lys	Val	Val	Gly	Ala	Trp	Asp	Pro	Thr	Val	Ser	Val	
				155					160					165	
Glu	Glu	Val	Arg	Pro	Gln	Ile	Thr	Ala	Leu	Val	Arg	Lys	Leu	Ile	
				170					175					180	
Leu	Leu	Lys	Arg	Glu	Asp	Leu									
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<210> 190

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 190

gcaggacttc tacgacttca aggc 24

<210> 191

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 191

agtctgggccc aggtacttga aggc 24

<210> 192

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 192

caacatccgg ggcaaactgg tgctgctgga gaagtaccgc ggatcgggtg 50

<210> 193

<211> 2187

<212> DNA

<213> Homo sapiens

<400> 193

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ctggggggccc gggccgccct ctctcggagt tggcaggaag ccaggttgca 150  
gggtgtccgc ttcctcagtt ccagagaggt ggatcgcatt gtctccacgc 200  
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 aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050  
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 cctcctgtc catccccac attcccctgt ctgtccttgt gatttggcat 2150  
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<210> 194

<211> 615

<212> PRT

<213> Homo sapiens

<400> 194

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				20					25				30	
Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg
				35					40				45	

Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr	50	55	60
Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly	65	70	75
Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala	80	85	90
Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu	95	100	105
Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly	110	115	120
Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr	125	130	135
Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile	140	145	150
Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr	155	160	165
Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln	170	175	180
Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro	185	190	195
Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu	200	205	210
Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly	215	220	225
Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln	230	235	240
His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His	245	250	255
Asp Pro Ile Asn Ile Gln Phe Thr Ser Gly Thr Thr Gly Ser Pro	260	265	270
Lys Gly Ala Thr Leu Ser His Tyr Asn Ile Val Asn Asn Ser Asn	275	280	285
Ile Leu Gly Glu Arg Leu Lys Leu His Glu Lys Thr Pro Glu Gln	290	295	300
Leu Arg Met Ile Leu Pro Asn Pro Leu Tyr His Cys Leu Gly Ser	305	310	315
Val Ala Gly Thr Met Met Cys Leu Met Tyr Gly Ala Thr Leu Ile	320	325	330
Leu Ala Ser Pro Ile Phe Asn Gly Lys Lys Ala Leu Glu Ala Ile			

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Ser Arg Glu Arg	Gly Thr Phe Leu Tyr	Gly Thr Pro Thr Met Phe			
	350	355			360
Val Asp Ile Leu	Asn Gln Pro Asp Phe	Ser Ser Tyr Asp Ile Ser			
	365	370			375
Thr Met Cys Gly	Gly Val Ile Ala Gly	Ser Pro Ala Pro Pro Glu			
	380	385			390
Leu Ile Arg Ala	Ile Ile Asn Lys Ile	Asn Met Lys Asp Leu Val			
	395	400			405
Val Ala Tyr Gly	Thr Thr Glu Asn Ser	Pro Val Thr Phe Ala His			
	410	415			420
Phe Pro Glu Asp	Thr Val Glu Gln Lys	Ala Glu Ser Val Gly Arg			
	425	430			435
Ile Met Pro His	Thr Glu Ala Arg Ile	Met Asn Met Glu Ala Gly			
	440	445			450
Thr Leu Ala Lys	Leu Asn Thr Pro Gly	Glu Leu Cys Ile Arg Gly			
	455	460			465
Tyr Cys Val Met	Leu Gly Tyr Trp Gly	Glu Pro Gln Lys Thr Glu			
	470	475			480
Glu Ala Val Asp	Gln Asp Lys Trp Tyr	Trp Thr Gly Asp Val Ala			
	485	490			495
Thr Met Asn Glu	Gln Gly Phe Cys Lys	Ile Val Gly Arg Ser Lys			
	500	505			510
Asp Met Ile Ile	Arg Gly Gly Glu Asn	Ile Tyr Pro Ala Glu Leu			
	515	520			525
Glu Asp Phe Phe	His Thr His Pro Lys	Val Gln Glu Val Gln Val			
	530	535			540
Val Gly Val Lys	Asp Asp Arg Met Gly	Glu Glu Ile Cys Ala Cys			
	545	550			555
Ile Arg Leu Lys	Asp Gly Glu Glu Thr	Thr Val Glu Glu Ile Lys			
	560	565			570
Ala Phe Cys Lys	Gly Lys Ile Ser His	Phe Lys Ile Pro Lys Tyr			
	575	580			585
Ile Val Phe Val	Thr Asn Tyr Pro Leu	Thr Ile Ser Gly Lys Ile			
	590	595			600
Gln Lys Phe Lys	Leu Arg Glu Gln Met	Glu Arg His Leu Asn Leu			
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<210> 195

<211> 642

<212> DNA  
<213> Homo sapiens

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gaggcacctt cctgtatggt acccccacga tgttcgtgga cattctgaac 250  
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<213> Homo sapiens

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<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

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			20						25				30	
Leu	Glu	Cys	Tyr	Ser	Cys	Val	Gln	Lys	Ala	Asp	Asp	Gly	Cys	Ser
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				50					55					60
Cys	Thr	Glu	Ala	Val	Gly	Ala	Val	Glu	Thr	Ile	His	Gly	Gln	Phe
				65					70					75
Ser	Leu	Ala	Val	Arg	Gly	Cys	Gly	Ser	Gly	Leu	Pro	Gly	Lys	Asn
				80					85					90
Asp	Arg	Gly	Leu	Asp	Leu	His	Gly	Leu	Leu	Ala	Phe	Ile	Gln	Leu
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Gln	Gln	Cys	Ala	Gln	Asp	Arg	Cys	Asn	Ala	Lys	Leu	Asn	Leu	Thr
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Ser	Arg	Ala	Leu	Asp	Pro	Ala	Gly	Asn	Glu	Ser	Ala	Tyr	Pro	Pro
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				140					145					150
Cys	Gln	Gly	Thr	Ser	Pro	Pro	Val	Val	Ser	Cys	Tyr	Asn	Ala	Ser
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Asp	His	Val	Tyr	Lys	Gly	Cys	Phe	Asp	Gly	Asn	Val	Thr	Leu	Thr
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Ala	Ala	Asn	Val	Thr	Val	Ser	Leu	Pro	Val	Arg	Gly	Cys	Val	Gln
				185					190					195
Asp	Glu	Phe	Cys	Thr	Arg	Asp	Gly	Val	Thr	Gly	Pro	Gly	Phe	Thr
				200					205					210
Leu	Ser	Gly	Ser	Cys	Cys	Gln	Gly	Ser	Arg	Cys	Asn	Ser	Asp	Leu
				215					220					225
Arg	Asn	Lys	Thr	Tyr	Phe	Ser	Pro	Arg	Ile	Pro	Pro	Leu	Val	Arg
				230					235					240
Leu	Pro	Pro	Pro	Glu	Pro	Thr	Thr	Val	Ala	Ser	Thr	Thr	Ser	Val
				245					250					255
Thr	Thr	Ser	Thr	Ser	Ala	Pro	Val	Arg	Pro	Thr	Ser	Thr	Thr	Lys
				260					265					270
Pro	Met	Pro	Ala	Pro	Thr	Ser	Gln	Thr	Pro	Arg	Gln	Gly	Val	Glu
				275					280					285
His	Glu	Ala	Ser	Arg	Asp	Glu	Glu	Pro	Arg	Leu	Thr	Gly	Gly	Ala
				290					295					300
Ala	Gly	His	Gln	Asp	Arg	Ser	Asn	Ser	Gly	Gln	Tyr	Pro	Ala	Lys
				305					310					315
Gly	Gly	Pro	Gln	Gln	Pro	His	Asn	Lys	Gly	Cys	Val	Ala	Pro	Thr
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Ala	Gly	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Ala	Ala	Gly	Val	Leu
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<210> 198

<211> 1657

<212> DNA

<213> Homo sapiens

<400> 198

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<210> 199

<211> 120

<212> PRT

<213> Homo sapiens

<400> 199

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Val	Leu	Ala	Ser	Ala	Ala	Glu	Lys	Glu	Lys	Glu	Met	Asp	Pro	Phe
				20					25					30

His	Tyr	Asp	Tyr	Gln	Thr	Leu	Arg	Ile	Gly	Gly	Leu	Val	Phe	Ala
				35					40					45

Val	Val	Leu	Phe	Ser	Val	Gly	Ile	Leu	Leu	Ile	Leu	Ser	Arg	Arg
				50					55					60

Cys	Lys	Cys	Ser	Phe	Asn	Gln	Lys	Pro	Arg	Ala	Pro	Gly	Asp	Glu
				65					70					75

Glu	Ala	Gln	Val	Glu	Asn	Leu	Ile	Thr	Ala	Asn	Ala	Thr	Glu	Pro
				80					85					90

Gln	Lys	Gln	Arg	Thr	Glu	Val	Gln	Pro	Ser	Gly	Gly	Ser	Leu	Trp
				95					100					105

Asn	Leu	Arg	Arg	Leu	Leu	Glu	Pro	Leu	Asp	Ala	Asn	Val	Asp	Ala
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<210> 200

<211> 415

<212> DNA

<213> Homo sapiens

<400> 200

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<211> 99  
<212> PRT  
<213> Homo sapiens

<400> 201  
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35 40 45  
Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala  
50 55 60  
Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg  
65 70 75  
Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly  
80 85 90  
Leu Arg Ser Ala Thr Pro Asp Ala Gln  
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<210> 202  
<211> 678  
<212> DNA  
<213> Homo sapiens

<400> 202  
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<210> 203

<211> 52

<212> PRT

<213> Homo sapiens

<400> 203

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 20 25 30

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Cys Gly Phe Ala Gly His Ser  
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<210> 204

<211> 1917

<212> DNA

<213> Homo sapiens

<400> 204

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<210> 205

<211> 392

<212> PRT

<213> Homo sapiens

<400> 205

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				20					25					30	
Lys	Trp	Lys	Val	Phe	Ile	Asp	Gln	Ile	Asn	Arg	Ser	Leu	Glu	Asn	
				35					40					45	
Tyr	Glu	Pro	Cys	Ser	Ser	Gln	Asn	Cys	Ser	Cys	Tyr	His	Gly	Val	
				50					55					60	
Ile	Glu	Glu	Asp	Leu	Thr	Pro	Phe	Arg	Gly	Gly	Ile	Ser	Arg	Lys	
				65					70					75	
Met	Met	Ala	Glu	Val	Val	Arg	Arg	Lys	Leu	Gly	Thr	His	Tyr	Gln	
				80					85					90	
Ile	Thr	Lys	Asn	Arg	Leu	Tyr	Arg	Glu	Asn	Asp	Cys	Met	Phe	Pro	
				95					100					105	
Ser	Arg	Cys	Ser	Gly	Val	Glu	His	Phe	Ile	Leu	Glu	Val	Ile	Gly	
				110					115					120	
Arg	Leu	Pro	Asp	Met	Glu	Met	Val	Ile	Asn	Val	Arg	Asp	Tyr	Pro	
				125					130					135	
Gln	Val	Pro	Lys	Trp	Met	Glu	Pro	Ala	Ile	Pro	Val	Phe	Ser	Phe	
				140					145					150	
Ser	Lys	Thr	Ser	Glu	Tyr	His	Asp	Ile	Met	Tyr	Pro	Ala	Trp	Thr	
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Phe	Trp	Glu	Gly	Gly	Pro	Ala	Val	Trp	Pro	Ile	Tyr	Pro	Thr	Gly	
				170					175					180	
Leu	Gly	Arg	Trp	Asp	Leu	Phe	Arg	Glu	Asp	Leu	Val	Arg	Ser	Ala	
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Ala	Gln	Trp	Pro	Trp	Lys	Lys	Lys	Asn	Ser	Thr	Ala	Tyr	Phe	Arg	
				200					205					210	
Gly	Ser	Arg	Thr	Ser	Pro	Glu	Arg	Asp	Pro	Leu	Ile	Leu	Leu	Ser	
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Arg	Lys	Asn	Pro	Lys	Leu	Val	Asp	Ala	Glu	Tyr	Thr	Lys	Asn	Gln	
				230					235					240	
Ala	Trp	Lys	Ser	Met	Lys	Asp	Thr	Leu	Gly	Lys	Pro	Ala	Ala	Lys	
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				275					280					285	
Cys	Gly	Ser	Leu	Val	Phe	His	Val	Gly	Asp	Glu	Trp	Leu	Glu	Phe	
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Phe	Tyr	Pro	Gln	Leu	Lys	Pro	Trp	Val	His	Tyr	Ile	Pro	Val	Lys	
				305					310					315	
Thr	Asp	Leu	Ser	Asn	Val	Gln	Glu	Leu	Leu	Gln	Phe	Val	Lys	Ala	
				320					325					330	
Asn	Asp	Asp	Val	Ala	Gln	Glu	Ile	Ala	Glu	Arg	Gly	Ser	Gln	Phe	
				335					340					345	
Ile	Arg	Asn	His	Leu	Gln	Met	Asp	Asp	Ile	Thr	Cys	Tyr	Trp	Glu	
				350					355					360	
Asn	Leu	Leu	Ser	Glu	Tyr	Ser	Lys	Phe	Leu	Ser	Tyr	Asn	Val	Thr	
				365					370					375	
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Glu Leu

<210> 206

<211> 1425

<212> DNA

<213> Homo sapiens

<400> 206

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 caaggtccac ttctcaccag caaggaagag tggggtatgg aagtcactctg 1050  
 tcccttcaact gtttagagca tgacactctc cccctcaaca gcctcctgag 1100  
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<210> 207

<211> 262

<212> PRT

<213> Homo sapiens

<400> 207

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				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35					40					45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50					55					60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Leu	Phe	Val	Gly
				65					70					75
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser

80								85				90			
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr	
				95					100					105	
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro	
				110					115					120	
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr	
				125					130					135	
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu	
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Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met	
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Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro	
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Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu	
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Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val	
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Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr	
				215					220					225	
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg	
				230					235					240	
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg	
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 <211> 2095  
 <212> DNA  
 <213> Homo sapiens

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 caacaaaaaa cttaagcttt aatttcatct ggaattccac agttttctta 200  
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actggagact ggagggttac acttgatgatt tattagtcag gcccttcaaa 1500  
gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550  
gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600  
ttcttaaaag ggtgttactg agttataagc tcaactaggct gtaaaaacaa 1650  
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tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750  
aaaaaacttc ttcactgaag ttatactgaa caaaatttta cctgtttttg 1800



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Asp Asn Tyr Ser	Tyr Arg Gly Phe Tyr	Gln Lys Thr His Ile	Ser		
	215		220		225
Tyr Gln Glu Tyr	Pro Phe Lys Val Phe	Pro Pro Tyr Cys Ser	Gly		
	230		235		240
Leu Gly Tyr Ile	Met Ser Arg Asp Leu	Val Pro Arg Ile Tyr	Glu		
	245		250		255
Met Met Gly His	Val Lys Pro Ile Lys	Phe Glu Asp Val Tyr	Val		
	260		265		270
Gly Ile Cys Leu	Asn Leu Leu Lys Val	Asn Ile His Ile Pro	Glu		
	275		280		285
Asp Thr Asn Leu	Phe Phe Leu Tyr Arg	Ile His Leu Asp Val	Cys		
	290		295		300
Gln Leu Arg Arg	Val Ile Ala Ala His	Gly Phe Ser Ser Lys	Glu		
	305		310		315
Ile Ile Thr Phe	Trp Gln Val Met Leu	Arg Asn Thr Thr Cys	His		
	320		325		330
Tyr					

<210> 210  
 <211> 745  
 <212> DNA  
 <213> Homo sapiens

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 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200  
 gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250  
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 ggtaagggac caggaggacc acctcccaag ggctgatgt actcagtcaa 400  
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 ctgttttttt actcaggaac gtgctacacg accagtgtac tatggattgt 550  
 ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600

gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650  
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 <211> 185  
 <212> PRT  
 <213> Homo sapiens

<400> 211  
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                     20                    25                    30  
 Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu  
                     35                    40                    45  
 His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp  
                     50                    55                    60  
 Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu  
                     65                    70                    75  
 Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val  
                     80                    85                    90  
 Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys  
                     95                    100                    105  
 Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Pro Lys Gly Leu Met  
                     110                    115                    120  
 Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly  
                     125                    130                    135  
 Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala  
                     140                    145                    150  
 Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys  
                     155                    160                    165  
 Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly  
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 Asp Thr Val Glu Asn  
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<210> 212  
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 <212> DNA  
 <213> Homo sapiens

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 tcctagtatt aaattcttat tgcttactga tttttttgag ttaagagttg 200  
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250  
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 ctcgccccca ttggtttctt ctttttggtta ctacagaaga ggaaatccag 500  
 gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550  
 tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc ttacaagaag 600  
 ccaaattaaa agcaaaggga ttgaatccgg atggaactcc agccctttca 650  
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 aaaagctgaa gagaaatcac caatctccat taatgtgaag acagtcaaaa 750  
 aagaacctga ggatagacaa caggcttcca aaagccctta caatggtgta 800  
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<210> 213  
 <211> 299  
 <212> PRT  
 <213> Homo sapiens

<400> 213  
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                     20                    25                    30  
 Gln Ile Pro Leu Pro Thr Arg Pro His Trp Phe Leu Leu Phe Gly  
                     35                    40                    45  
 Thr Thr Glu Glu Glu Ile Gln Glu Ile Cys Ile Glu Thr Leu Arg  
                     50                    55                    60  
 Leu Tyr Thr Arg Lys Lys Pro Asn Tyr Glu Leu Leu Glu Lys Glu  
                     65                    70                    75  
 Val Glu Lys Arg Lys Val Ala Leu Gln Glu Ala Lys Leu Lys Ala  
                     80                    85                    90  
 Lys Gly Leu Asn Pro Asp Gly Thr Pro Ala Leu Ser Thr Leu Gly  
                     95                    100                    105  
 Gly Phe Ser Pro Ala Ser Lys Pro Ser Ser Pro Arg Glu Val Lys  
                     110                    115                    120  
 Ala Glu Glu Lys Ser Pro Ile Ser Ile Asn Val Lys Thr Val Lys  
                     125                    130                    135  
 Lys Glu Pro Glu Asp Arg Gln Gln Ala Ser Lys Ser Pro Tyr Asn  
                     140                    145                    150  
 Gly Val Arg Lys Asp Ser Lys Arg Ser Arg Asn Ser Arg Ser Ala  
                     155                    160                    165  
 Ser Arg Ser Arg Ser Arg Thr Arg Ser Arg Ser Arg Ser His Thr  
                     170                    175                    180  
 Pro Arg Arg His Tyr Asn Asn Arg Arg Ser Arg Ser Gly Thr Tyr  
                     185                    190                    195  
 Ser Ser Arg Ser Arg Ser Arg Ser Arg Ser His Ser Glu Ser Pro  
                     200                    205                    210



Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys
				275					280					285
His	His	Gly	Gly	Ser	Arg	Ser	Gly	His	Gly	Arg	His	Arg	Arg	
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<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 563

<223> unknown base

<400> 214

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<212> DNA  
<213> Homo sapiens

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<210> 216  
 <211> 479  
 <212> PRT  
 <213> Homo sapiens

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 Leu Leu Cys Asn Gly Ser Leu Phe Arg Tyr Lys His Pro Ser Glu  
                     35                    40                    45  
 Glu Glu Leu Arg Ala Leu Ala Gly Lys Pro Arg Pro Arg Gly Arg  
                     50                    55                    60  
 Lys Glu Arg Trp Ala Asn Gly Leu Ser Glu Glu Lys Pro Leu Ser  
                     65                    70                    75  
 Val Pro Arg Asp Ala Pro Phe Gln Leu Glu Thr Cys Pro Leu Thr  
                     80                    85                    90  
 Thr Val Asp Ala Leu Val Leu Arg Phe Phe Leu Glu Tyr Gln Trp  
                     95                    100                    105  
 Phe Val Asp Phe Ala Val Tyr Ser Gly Gly Val Tyr Leu Phe Thr  
                     110                    115                    120  
 Glu Ala Tyr Tyr Tyr Met Leu Gly Pro Ala Lys Glu Thr Asn Ile  
                     125                    130                    135  
 Ala Val Phe Trp Cys Leu Leu Thr Val Thr Phe Ser Ile Lys Met  
                     140                    145                    150

Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly	
				155					160					165	
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu	
				170					175					180	
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly	
				185					190					195	
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu	
				200					205					210	
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu	
				215					220					225	
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala	
				230					235					240	
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp	
				245					250					255	
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu	
				260					265					270	
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr	
				275					280					285	
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu	
				290					295					300	
Thr	Arg	Phe	Ser	Leu	Leu	Ser	Asp	Ser	Ala	Phe	Asp	Ser	Gly	Arg	
				305					310					315	
Leu	Trp	Leu	Leu	Val	Val	Leu	Cys	Leu	Leu	Arg	Leu	Ala	Val	Thr	
				320					325					330	
Arg	Pro	His	Leu	Gln	Ala	Tyr	Leu	Cys	Leu	Ala	Lys	Ala	Arg	Val	
				335					340					345	
Glu	Gln	Leu	Arg	Arg	Glu	Ala	Gly	Arg	Ile	Glu	Ala	Arg	Glu	Ile	
				350					355					360	
Gln	Gln	Arg	Val	Val	Arg	Val	Tyr	Cys	Tyr	Val	Thr	Val	Val	Ser	
				365					370					375	
Leu	Gln	Tyr	Leu	Thr	Pro	Leu	Ile	Leu	Thr	Leu	Asn	Cys	Thr	Leu	
				380					385					390	
Leu	Leu	Lys	Thr	Leu	Gly	Gly	Tyr	Ser	Trp	Gly	Leu	Gly	Pro	Ala	
				395					400					405	
Pro	Leu	Leu	Ser	Pro	Asp	Pro	Ser	Ser	Ala	Ser	Ala	Ala	Pro	Ile	
				410					415					420	
Gly	Ser	Gly	Glu	Asp	Glu	Val	Gln	Gln	Thr	Ala	Ala	Arg	Ile	Ala	
				425					430					435	
Gly	Ala	Leu	Gly	Gly	Leu	Leu	Thr	Pro	Leu	Phe	Leu	Arg	Gly	Val	

	440		445		450
Leu	Ala	Tyr	Leu	Ile	Trp
				Trp	Thr
				Ala	Ala
				Cys	Gln
				Leu	Leu
				Ala	
				455	460
					465
Ser	Leu	Phe	Gly	Leu	Tyr
				Phe	His
				Gln	His
				Leu	Ala
				Gly	Ser
				470	475

<210> 217  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 5, 146  
 <223> unknown base

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 ggaggagctt cgggccctgg cggggaagcc ggggccaga ggcaggaaag 200  
 agcgggtggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250  
 gatgccccgt tccagctgga gacctgcccc ctcacgaccg tggatgccct 300  
 ggtcctgcgc ttcttcctgg agtaccagtg gtttgtggac tttgctgtgt 350  
 actcgggcgg cgtgtacctc ttcacagagg cctactacta catgctggga 400  
 ccagccaagg agactaacat tgctgtgttc tggtagcctgc tcacagtgc 450  
 cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500  
 aggagggggg tgagcgtct gtctgcctca cctttgcctt cctcttctg 550  
 ctgctggcca tgctggtgca agcg 574

<210> 218  
 <211> 2571  
 <212> DNA  
 <213> Homo sapiens

<400> 218  
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 ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150  
 ggctggtttg gggccttgta gctgacagaa ggtggccagg gagaatgcag 200  
 cacactgctc ggagaatgaa ggcgcttctg ttgctggtct tgccttggct 250

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aggcgctcac aagatggctg tccagacggc tgtgcgagcc tcacagccac 400  
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acgagcctgg cctagacaac cctgcctacg tgtcctcggc agaggacggg 500  
cagccagcaa tcagcccagt ggactctggc cggagcaacc gaactagggc 550  
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 caccagcata caatgatgga agaattagat gtggtgatat tcttcttgct 2000  
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 gcactttttt atagaatcaa tgatgggtca gaggaaaaca gaaaaatcac 2150  
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 ctgaagtctg ccaagggtac attatggcca tttttaattt acagctaaaa 2500  
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<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

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				20					25				30
Leu	Cys	Lys	Gly	Ala	Ser	His	Tyr	Gly	Leu	Thr	Lys	Asp	Arg
				35					40				45
Arg	Arg	Ser	Gln	Asp	Gly	Cys	Pro	Asp	Gly	Cys	Ala	Ser	Leu
				50					55				60
Ala	Thr	Ala	Pro	Ser	Pro	Glu	Val	Ser	Ala	Ala	Ala	Thr	Ile
				65					70				75
Leu	Met	Thr	Asp	Glu	Pro	Gly	Leu	Asp	Asn	Pro	Ala	Tyr	Val
													Ser

80					85					90				
Ser	Ala	Glu	Asp	Gly	Gln	Pro	Ala	Ile	Ser	Pro	Val	Asp	Ser	Gly
				95					100					105
Arg	Ser	Asn	Arg	Thr	Arg	Ala	Arg	Pro	Phe	Glu	Arg	Ser	Thr	Ile
				110					115					120
Arg	Ser	Arg	Ser	Phe	Lys	Lys	Ile	Asn	Arg	Ala	Leu	Ser	Val	Leu
				125					130					135
Arg	Arg	Thr	Lys	Ser	Gly	Ser	Ala	Val	Ala	Asn	His	Ala	Asp	Gln
				140					145					150
Gly	Arg	Glu	Asn	Ser	Glu	Asn	Thr	Thr	Ala	Pro	Glu	Val	Phe	Pro
				155					160					165
Arg	Leu	Tyr	His	Leu	Ile	Pro	Asp	Gly	Glu	Ile	Thr	Ser	Ile	Lys
				170					175					180
Ile	Asn	Arg	Val	Asp	Pro	Ser	Glu	Ser	Leu	Ser	Ile	Arg	Leu	Val
				185					190					195
Gly	Gly	Ser	Glu	Thr	Pro	Leu	Val	His	Ile	Ile	Ile	Gln	His	Ile
				200					205					210
Tyr	Arg	Asp	Gly	Val	Ile	Ala	Arg	Asp	Gly	Arg	Leu	Leu	Pro	Gly
				215					220					225
Asp	Ile	Ile	Leu	Lys	Val	Asn	Gly	Met	Asp	Ile	Ser	Asn	Val	Pro
				230					235					240
His	Asn	Tyr	Ala	Val	Arg	Leu	Leu	Arg	Gln	Pro	Cys	Gln	Val	Leu
				245					250					255
Trp	Leu	Thr	Val	Met	Arg	Glu	Gln	Lys	Phe	Arg	Ser	Arg	Asn	Asn
				260					265					270
Gly	Gln	Ala	Pro	Asp	Ala	Tyr	Arg	Pro	Arg	Asp	Asp	Ser	Phe	His
				275					280					285
Val	Ile	Leu	Asn	Lys	Ser	Ser	Pro	Glu	Glu	Gln	Leu	Gly	Ile	Lys
				290					295					300
Leu	Val	Arg	Lys	Val	Asp	Glu	Pro	Gly	Val	Phe	Ile	Phe	Asn	Val
				305					310					315
Leu	Asp	Gly	Gly	Val	Ala	Tyr	Arg	His	Gly	Gln	Leu	Glu	Glu	Asn
				320					325					330
Asp	Arg	Val	Leu	Ala	Ile	Asn	Gly	His	Asp	Leu	Arg	Tyr	Gly	Ser
				335					340					345
Pro	Glu	Ser	Ala	Ala	His	Leu	Ile	Gln	Ala	Ser	Glu	Arg	Arg	Val
				350					355					360
His	Leu	Val	Val	Ser	Arg	Gln	Val	Arg	Gln	Arg	Ser	Pro	Asp	Ile
				365					370					375



Phe	Gln	Glu	Ala	Gly	Trp	Asn	Ser	Asn	Gly	Ser	Trp	Ser	Pro	Gly		380	385	390
Pro	Gly	Glu	Arg	Ser	Asn	Thr	Pro	Lys	Pro	Leu	His	Pro	Thr	Ile		395	400	405
Thr	Cys	His	Glu	Lys	Val	Val	Asn	Ile	Gln	Lys	Asp	Pro	Gly	Glu		410	415	420
Ser	Leu	Gly	Met	Thr	Val	Ala	Gly	Gly	Ala	Ser	His	Arg	Glu	Trp		425	430	435
Asp	Leu	Pro	Ile	Tyr	Val	Ile	Ser	Val	Glu	Pro	Gly	Gly	Val	Ile		440	445	450
Ser	Arg	Asp	Gly	Arg	Ile	Lys	Thr	Gly	Asp	Ile	Leu	Leu	Asn	Val		455	460	465
Asp	Gly	Val	Glu	Leu	Thr	Glu	Val	Ser	Arg	Ser	Glu	Ala	Val	Ala		470	475	480
Leu	Leu	Lys	Arg	Thr	Ser	Ser	Ser	Ile	Val	Leu	Lys	Ala	Leu	Glu		485	490	495
Val	Lys	Glu	Tyr	Glu	Pro	Gln	Glu	Asp	Cys	Ser	Ser	Pro	Ala	Ala		500	505	510
Leu	Asp	Ser	Asn	His	Asn	Met	Ala	Pro	Pro	Ser	Asp	Trp	Ser	Pro		515	520	525
Ser	Trp	Val	Met	Trp	Leu	Glu	Leu	Pro	Arg	Cys	Leu	Tyr	Asn	Cys		530	535	540
Lys	Asp	Ile	Val	Leu	Arg	Arg	Asn	Thr	Ala	Gly	Ser	Leu	Gly	Phe		545	550	555
Cys	Ile	Val	Gly	Gly	Tyr	Glu	Glu	Tyr	Asn	Gly	Asn	Lys	Pro	Phe		560	565	570
Phe	Ile	Lys	Ser	Ile	Val	Glu	Gly	Thr	Pro	Ala	Tyr	Asn	Asp	Gly		575	580	585
Arg	Ile	Arg	Cys	Gly	Asp	Ile	Leu	Leu	Ala	Val	Asn	Gly	Arg	Ser		590	595	600
Thr	Ser	Gly	Met	Ile	His	Ala	Cys	Leu	Ala	Arg	Leu	Leu	Lys	Glu		605	610	615
Leu	Lys	Gly	Arg	Ile	Thr	Leu	Thr	Ile	Val	Ser	Trp	Pro	Gly	Thr		620	625	630

Phe Leu

<210> 220  
 <211> 773  
 <212> DNA  
 <213> Homo sapiens

<400> 220

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gtttttaaca tcatacagccc aagcaacaat ggtggcaatg ttcaggagac 200  
agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250  
gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300  
tccaggggtgc tctcccgaag agcctgcttt atcctgaaga tggaccatca 350  
gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400  
ctctggacaa catgttctcc aacaaataca cctgggtcaa gtacaaccct 450  
ctggagtctc tgatcaaaga cgtggattgg ttcctgcttg ggtcacccat 500  
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atcttgggaa tttctctg tgcagacatt catgtttagg atgattagcc 650  
ctcttgtttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700  
tcaaattaaa ttctttccca atgcccacac taattttgag attcagtcag 750  
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<210> 221

<211> 184

<212> PRT

<213> Homo sapiens

<400> 221

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				20					25					30
Asn	Asn	Gly	Gly	Asn	Val	Gln	Glu	Thr	Val	Thr	Ile	Asp	Asn	Glu
				35					40					45
Lys	Asn	Thr	Ala	Ile	Val	Asn	Ile	His	Ala	Gly	Ser	Cys	Ser	Ser
				50					55					60
Thr	Thr	Ile	Phe	Asp	Tyr	Lys	His	Gly	Tyr	Ile	Ala	Ser	Arg	Val
				65					70					75
Leu	Ser	Arg	Arg	Ala	Cys	Phe	Ile	Leu	Lys	Met	Asp	His	Gln	Asn
				80					85					90
Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln

	95		100		105
Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr					
	110		115		120
Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu					
	125		130		135
Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys					
	140		145		150
Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys					
	155		160		165
Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala					
	170		175		180
Asp Ile His Val					

<210> 222  
 <211> 992  
 <212> DNA  
 <213> Homo sapiens

<400> 222  
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<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

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Ile	Ala	Tyr	Lys	Val	Leu	Glu	Val	Phe	Pro	Lys	Gly	Arg	Trp	Val	35	40	45	
Leu	Ile	Thr	Cys	Cys	Ala	Pro	Gln	Pro	Pro	Pro	Pro	Ile	Thr	Tyr	50	55	60	
Ser	Leu	Cys	Gly	Thr	Lys	Asn	Ile	Lys	Val	Ala	Lys	Lys	Val	Val	65	70	75	
Lys	Thr	His	Glu	Pro	Ala	Ser	Phe	Asn	Leu	Asn	Val	Thr	Leu	Lys	80	85	90	
Ser	Ser	Pro	Asp	Leu	Leu	Thr	Tyr	Phe	Cys	Arg	Ala	Ser	Ser	Thr	95	100	105	
Ser	Gly	Ala	His	Val	Asp	Ser	Ala	Arg	Leu	Gln	Met	His	Trp	Glu	110	115	120	
Leu	Trp	Ser	Lys	Pro	Val	Ser	Glu	Leu	Arg	Ala	Asn	Phe	Thr	Leu	125	130	135	
Gln	Asp	Arg	Gly	Ala	Gly	Pro	Arg	Val	Glu	Met	Ile	Cys	Gln	Ala	140	145	150	
Ser	Ser	Gly	Ser	Pro	Pro	Ile	Thr	Asn	Ser	Leu	Ile	Gly	Lys	Asp	155	160	165	
Gly	Gln	Val	His	Leu	Gln	Gln	Arg	Pro	Cys	His	Arg	Gln	Pro	Ala	170	175	180	
Asn	Phe	Ser	Phe	Leu	Pro	Ser	Gln	Thr	Ser	Asp	Trp	Phe	Trp	Cys	185	190	195	
Gln	Ala	Ala	Asn	Asn	Ala	Asn	Val	Gln	His	Ser	Ala	Leu	Thr	Val	200	205	210	
Val	Pro	Pro	Gly	Gly	Asp	Gln	Lys	Met	Glu	Asp	Trp	Gln	Gly	Pro	215	220	225	

Leu	Glu	Ser	Pro	Ile	Leu	Ala	Leu	Pro	Leu	Tyr	Arg	Ser	Thr	Arg
				230					235					240
Arg	Leu	Ser	Glu	Glu	Glu	Phe	Gly	Gly	Phe	Arg	Ile	Gly	Asn	Gly
				245					250					255
Glu	Val	Arg	Gly	Arg	Lys	Ala	Ala	Ala	Met					
				260					265					

<210> 224

<211> 1297

<212> DNA

<213> Homo sapiens

<400> 224

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ggtggtgtgc ggttcaaggc cagggtgatg aaaagacttt tcttcactat 200
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ttcctgcact taaagttctg gctgactaaa caagatatat cattttcttt 1050
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Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys  
 230 235 240

Phe Ile Leu Pro Gly Ile  
 245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

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<210> 227

<211> 115

<212> PRT

<213> Homo sapiens

<400> 227

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 Phe His Leu Gln Asn His Glu Leu Trp Leu Leu Ile Lys Arg Glu  
 35 40 45  
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys

	50		55		60
Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr					
	65		70		75
Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu					
	80		85		90
Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln					
	95		100		105
Pro Thr Glu Gln His Phe Trp Ala Arg Leu					
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<210> 228

<211> 2185

<212> DNA

<213> Homo sapiens

<400> 228

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<210> 229

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

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Ala	Ile	Leu	Leu	Pro	Phe	Val	Tyr	Leu	Thr	Ala	Gln	Val	Trp	Ile	20	25	30
Leu	Cys	Ala	Ala	Ile	Ala	Ala	Ala	Ala	Ser	Ala	Gly	Pro	Gln	Asn	35	40	45
Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val	Val	50	55	60
Cys	Thr	Arg	Arg	Gly	Leu	Ser	Glu	Val	Pro	Gln	Gly	Ile	Pro	Ser	65	70	75
Asn	Thr	Arg	Tyr	Leu	Asn	Leu	Met	Glu	Asn	Asn	Ile	Gln	Met	Ile	80	85	90
Gln	Ala	Asp	Thr	Phe	Arg	His	Leu	His	His	Leu	Glu	Val	Leu	Gln	95	100	105
Leu	Gly	Arg	Asn	Ser	Ile	Arg	Gln	Ile	Glu	Val	Gly	Ala	Phe	Asn	110	115	120
Gly	Leu	Ala	Ser	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Trp	Leu	125	130	135
Thr	Val	Ile	Pro	Ser	Gly	Ala	Phe	Glu	Tyr	Leu	Ser	Lys	Leu	Arg	140	145	150
Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser	Tyr	155	160	165
Ala	Phe	Asn	Arg	Val	Pro	Ser	Leu	Met	Arg	Leu	Asp	Leu	Gly	Glu	170	175	180
Leu	Lys	Lys	Leu	Glu	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	Leu	185	190	195
Phe	Asn	Leu	Lys	Tyr	Leu	Asn	Leu	Gly	Met	Cys	Asn	Ile	Lys	Asp	200	205	210
Met	Pro	Asn	Leu	Thr	Pro	Leu	Val	Gly	Leu	Glu	Glu	Leu	Glu	Met	215	220	225
Ser	Gly	Asn	His	Phe	Pro	Glu	Ile	Arg	Pro	Gly	Ser	Phe	His	Gly	230	235	240
Leu	Ser	Ser	Leu	Lys	Lys	Leu	Trp	Val	Met	Asn	Ser	Gln	Val	Ser	245	250	255
Leu	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Gly	Leu	Ala	Ser	Leu	Val	Glu	260	265	270
Leu	Asn	Leu	Ala	His	Asn	Asn	Leu	Ser	Ser	Leu	Pro	His	Asp	Leu	275	280	285
Phe	Thr	Pro	Leu	Arg	Tyr	Leu	Val	Glu	Leu	His	Leu	His	His	Asn	290	295	300
Pro	Trp	Asn	Cys	Asp	Cys	Asp	Ile	Leu	Trp	Leu	Ala	Trp	Trp	Leu			

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Arg Glu Tyr Ile	Pro Thr Asn Ser Thr	Cys Cys Gly Arg Cys	His		
	320	325	330		
Ala Pro Met His	Met Arg Gly Arg Tyr	Leu Val Glu Val Asp	Gln		
	335	340	345		
Ala Ser Phe Gln	Cys Ser Ala Pro Phe	Ile Met Asp Ala Pro	Arg		
	350	355	360		
Asp Leu Asn Ile	Ser Glu Gly Arg Met	Ala Glu Leu Lys Cys	Arg		
	365	370	375		
Thr Pro Pro Met	Ser Ser Val Lys Trp	Leu Leu Pro Asn Gly	Thr		
	380	385	390		
Val Leu Ser His	Ala Ser Arg His Pro	Arg Ile Ser Val Leu	Asn		
	395	400	405		
Asp Gly Thr Leu	Asn Phe Ser His Val	Leu Leu Ser Asp Thr	Gly		
	410	415	420		
Val Tyr Thr Cys	Met Val Thr Asn Val	Ala Gly Asn Ser Asn	Ala		
	425	430	435		
Ser Ala Tyr Leu	Asn Val Ser Thr Ala	Glu Leu Asn Thr Ser	Asn		
	440	445	450		
Tyr Ser Phe Phe	Thr Thr Val Thr Val	Glu Thr Thr Glu Ile	Ser		
	455	460	465		
Pro Glu Asp Thr	Thr Arg Lys Tyr Lys	Pro Val Pro Thr Thr	Ser		
	470	475	480		
Thr Gly Tyr Gln	Pro Ala Tyr Thr Thr	Ser Thr Thr Val Leu	Ile		
	485	490	495		
Gln Thr Thr Arg	Val Pro Lys Gln Val	Ala Val Pro Ala Thr	Asp		
	500	505	510		
Thr Thr Asp Lys	Met Gln Thr Ser Leu	Asp Glu Val Met Lys	Thr		
	515	520	525		
Thr Lys Ile Ile	Ile Gly Cys Phe Val	Ala Val Thr Leu Leu	Ala		
	530	535	540		
Ala Ala Met Leu	Ile Val Phe Tyr Lys	Leu Arg Lys Arg His	Gln		
	545	550	555		
Gln Arg Ser Thr	Val Thr Ala Ala Arg	Thr Val Glu Ile Ile	Gln		
	560	565	570		
Val Asp Glu Asp	Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr	Ala		
	575	580	585		
Ala Pro Ser Gly	Val Ser Gly Glu Gly	Ala Val Val Leu Pro	Thr		
	590	595	600		

Ile	His	Asp	His	Ile	Asn	Tyr	Asn	Thr	Tyr	Lys	Pro	Ala	His	Gly
				605					610					615
Ala	His	Trp	Thr	Glu	Asn	Ser	Leu	Gly	Asn	Ser	Leu	His	Pro	Thr
				620					625					630
Val	Thr	Thr	Ile	Ser	Glu	Pro	Tyr	Ile	Ile	Gln	Thr	His	Thr	Lys
				635					640					645
Asp	Lys	Val	Gln	Glu	Thr	Gln	Ile							
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<210> 230

<211> 2846

<212> DNA

<213> Homo sapiens

<400> 230

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<210> 231

<211> 720

<212> PRT

<213> Homo sapiens

<400> 231

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Glu	Ala	Cys	Pro	Gly	Ala	Glu	Trp	Asn	Ile	Met	Cys	Arg	Glu	Cys	35	40	45	
Cys	Glu	Tyr	Asp	Gln	Ile	Glu	Cys	Val	Cys	Pro	Gly	Lys	Arg	Glu	50	55	60	
Val	Val	Gly	Tyr	Thr	Ile	Pro	Cys	Cys	Arg	Asn	Glu	Glu	Asn	Glu	65	70	75	
Cys	Asp	Ser	Cys	Leu	Ile	His	Pro	Gly	Cys	Thr	Ile	Phe	Glu	Asn	80	85	90	
Cys	Lys	Ser	Cys	Arg	Asn	Gly	Ser	Trp	Gly	Gly	Thr	Leu	Asp	Asp	95	100	105	
Phe	Tyr	Val	Lys	Gly	Phe	Tyr	Cys	Ala	Glu	Cys	Arg	Ala	Gly	Trp	110	115	120	
Tyr	Gly	Gly	Asp	Cys	Met	Arg	Cys	Gly	Gln	Val	Leu	Arg	Ala	Pro	125	130	135	
Lys	Gly	Gln	Ile	Leu	Leu	Glu	Ser	Tyr	Pro	Leu	Asn	Ala	His	Cys	140	145	150	
Glu	Trp	Thr	Ile	His	Ala	Lys	Pro	Gly	Phe	Val	Ile	Gln	Leu	Arg	155	160	165	
Phe	Val	Met	Leu	Ser	Leu	Glu	Phe	Asp	Tyr	Met	Cys	Gln	Tyr	Asp	170	175	180	

Tyr	Val	Glu	Val	Arg	Asp	Gly	Asp	Asn	Arg	Asp	Gly	Gln	Ile	Ile	
				185					190					195	
Lys	Arg	Val	Cys	Gly	Asn	Glu	Arg	Pro	Ala	Pro	Ile	Gln	Ser	Ile	
				200					205					210	
Gly	Ser	Ser	Leu	His	Val	Leu	Phe	His	Ser	Asp	Gly	Ser	Lys	Asn	
				215					220					225	
Phe	Asp	Gly	Phe	His	Ala	Ile	Tyr	Glu	Glu	Ile	Thr	Ala	Cys	Ser	
				230					235					240	
Ser	Ser	Pro	Cys	Phe	His	Asp	Gly	Thr	Cys	Val	Leu	Asp	Lys	Ala	
				245					250					255	
Gly	Ser	Tyr	Lys	Cys	Ala	Cys	Leu	Ala	Gly	Tyr	Thr	Gly	Gln	Arg	
				260					265					270	
Cys	Glu	Asn	Leu	Leu	Glu	Glu	Arg	Asn	Cys	Ser	Asp	Pro	Gly	Gly	
				275					280					285	
Pro	Val	Asn	Gly	Tyr	Gln	Lys	Ile	Thr	Gly	Gly	Pro	Gly	Leu	Ile	
				290					295					300	
Asn	Gly	Arg	His	Ala	Lys	Ile	Gly	Thr	Val	Val	Ser	Phe	Phe	Cys	
				305					310					315	
Asn	Asn	Ser	Tyr	Val	Leu	Ser	Gly	Asn	Glu	Lys	Arg	Thr	Cys	Gln	
				320					325					330	
Gln	Asn	Gly	Glu	Trp	Ser	Gly	Lys	Gln	Pro	Ile	Cys	Ile	Lys	Ala	
				335					340					345	
Cys	Arg	Glu	Pro	Lys	Ile	Ser	Asp	Leu	Val	Arg	Arg	Arg	Val	Leu	
				350					355					360	
Pro	Met	Gln	Val	Gln	Ser	Arg	Glu	Thr	Pro	Leu	His	Gln	Leu	Tyr	
				365					370					375	
Ser	Ala	Ala	Phe	Ser	Lys	Gln	Lys	Leu	Gln	Ser	Ala	Pro	Thr	Lys	
				380					385					390	
Lys	Pro	Ala	Leu	Pro	Phe	Gly	Asp	Leu	Pro	Met	Gly	Tyr	Gln	His	
				395					400					405	
Leu	His	Thr	Gln	Leu	Gln	Tyr	Glu	Cys	Ile	Ser	Pro	Phe	Tyr	Arg	
				410					415					420	
Arg	Leu	Gly	Ser	Ser	Arg	Arg	Thr	Cys	Leu	Arg	Thr	Gly	Lys	Trp	
				425					430					435	
Ser	Gly	Arg	Ala	Pro	Ser	Cys	Ile	Pro	Ile	Cys	Gly	Lys	Ile	Glu	
				440					445					450	
Asn	Ile	Thr	Ala	Pro	Lys	Thr	Gln	Gly	Leu	Arg	Trp	Pro	Trp	Gln	
				455					460					465	
Ala	Ala	Ile	Tyr	Arg	Arg	Thr	Ser	Gly	Val	His	Asp	Gly	Ser	Leu	

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His Lys Gly Ala	Trp Phe Leu Val Cys	Ser Gly Ala Leu Val	Asn		
	485		490		495
Glu Arg Thr Val	Val Val Ala Ala His	Cys Val Thr Asp Leu	Gly		
	500		505		510
Lys Val Thr Met	Ile Lys Thr Ala Asp	Leu Lys Val Val Leu	Gly		
	515		520		525
Lys Phe Tyr Arg	Asp Asp Asp Arg Asp	Glu Lys Thr Ile Gln	Ser		
	530		535		540
Leu Gln Ile Ser	Ala Ile Ile Leu His	Pro Asn Tyr Asp Pro	Ile		
	545		550		555
Leu Leu Asp Ala	Asp Ile Ala Ile Leu	Lys Leu Leu Asp Lys	Ala		
	560		565		570
Arg Ile Ser Thr	Arg Val Gln Pro Ile	Cys Leu Ala Ala Ser	Arg		
	575		580		585
Asp Leu Ser Thr	Ser Phe Gln Glu Ser	His Ile Thr Val Ala	Gly		
	590		595		600
Trp Asn Val Leu	Ala Asp Val Arg Ser	Pro Gly Phe Lys Asn	Asp		
	605		610		615
Thr Leu Arg Ser	Gly Val Val Ser Val	Val Asp Ser Leu Leu	Cys		
	620		625		630
Glu Glu Gln His	Glu Asp His Gly Ile	Pro Val Ser Val Thr	Asp		
	635		640		645
Asn Met Phe Cys	Ala Ser Trp Glu Pro	Thr Ala Pro Ser Asp	Ile		
	650		655		660
Cys Thr Ala Glu	Thr Gly Gly Ile Ala	Ala Val Ser Phe Pro	Gly		
	665		670		675
Arg Ala Ser Pro	Glu Pro Arg Trp His	Leu Met Gly Leu Val	Ser		
	680		685		690
Trp Ser Tyr Asp	Lys Thr Cys Ser His	Arg Leu Ser Thr Ala	Phe		
	695		700		705
Thr Lys Val Leu	Pro Phe Lys Asp Trp	Ile Glu Arg Asn Met	Lys		
	710		715		720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



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<210> 233  
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<220>  
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<400> 233  
 tgtcaaggac gcactgccgt catg 24

<210> 234  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
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<400> 234  
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<210> 235  
 <211> 1964  
 <212> DNA  
 <213> Homo sapiens

<400> 235  
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 caaattccga ttactgttgc tgttgacttt gtgcctgaca gtggttgggt 200  
 gggccaccag taactacttc gtgggtgccca ttcaagagat tcctaaagca 250  
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 cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400  
 gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450  
 ccggtatcgc cctcaggaat gtaaagcttt acagaggggc gccatcctcg 500  
 ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550  
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 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950  
 gtgaaaaagc aaaa 1964

<210> 236  
 <211> 344  
 <212> PRT  
 <213> Homo sapiens  
 <220>

<221> Signal peptide  
 <222> 1-27  
 <223> Signal peptide

<220>  
 <221> N-glycosylation sites  
 <222> 4-7, 220-223, 335-338  
 <223> N-glycosylation sites

<220>  
 <221> Xylose isomerase proteins  
 <222> 191-201  
 <223> Xylose isomerase proteins

<400> 236

Met	Gly	Phe	Asn	Leu	Thr	Phe	His	Leu	Ser	Tyr	Lys	Phe	Arg	Leu	1	5	10	15
Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	20	25	30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	35	40	45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	50	55	60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	65	70	75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	80	85	90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	95	100	105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	110	115	120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	125	130	135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	140	145	150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	155	160	165	
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	170	175	180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	185	190	195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	200	205	210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg				

	215		220		225
Leu Arg Tyr Ser Gly Tyr Phe Gly Gly Val Thr Ala Leu Ser Arg					
	230		235		240
Glu Gln Phe Phe Lys Val Asn Gly Phe Ser Asn Asn Tyr Trp Gly					
	245		250		255
Trp Gly Gly Glu Asp Asp Asp Leu Arg Leu Arg Val Glu Leu Gln					
	260		265		270
Arg Met Lys Ile Ser Arg Pro Leu Pro Glu Val Gly Lys Tyr Thr					
	275		280		285
Met Val Phe His Thr Arg Asp Lys Gly Asn Glu Val Asn Ala Glu					
	290		295		300
Arg Met Lys Leu Leu His Gln Val Ser Arg Val Trp Arg Thr Asp					
	305		310		315
Gly Leu Ser Ser Cys Ser Tyr Lys Leu Val Ser Val Glu His Asn					
	320		325		330
Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala					
	335		340		

<210> 237

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 237

ccttacctca gaggccagag caagc 25

<210> 238

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 238

gagcttcacg cgttctgcgt tcacc 25

<210> 239

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 239

caggaatgta aagctttaca gagggtcgcc atcctcgttc cccacc 46

<210> 240  
<211> 2567  
<212> DNA  
<213> Homo sapiens

<400> 240  
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tctcccgttc cgggccccgc aatggcccag gcagtgtggt cgcgcctcgg 150  
ccgcatcctc tggcttgctt gcctcctgcc ctgggccccg gcaggggtgg 200  
ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgccaccacg 250  
ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300  
cctggccctg cccgctgacg cccacctcta ccgcttccac tggatccaca 350  
ccccgctggt gcttactggc aagatggaga aggtctcag ctccaccatc 400  
cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450  
tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtggtcc 500  
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tcaagcctga gtgcctcccg ctggaggaag gggagtgcc ccctgtgtcc 1000  
gtggccagca cagcgtacaa cctgaccac accttcaggg acctgggga 1050  
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accacaagat ccaggtgtgg ccctccagaa tccagccggc tgtctttgct 1150  
ttcccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200  
gacctgcgg aatgccactc agcaaaagga catggtggag aaccgggagc 1250  
caccctctgg ggtcagggtg tgctgccaga tgtgctgtgg gcctttcttg 1300

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 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcgggt 2000  
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 aaaaaaatac aaaaagttag ccgggcgtgg tgggtgggtg ctgtagtccc 2450  
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 gcgagactct gtctcca 2567

<210> 241  
 <211> 423  
 <212> PRT  
 <213> Homo sapiens  
 <400> 241

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Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu	
				20					25					30	
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	
				35					40					45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	
				50					55					60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	
				65					70					75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	
				80					85					90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	
				95					100					105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	
				110					115					120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly	
				125					130					135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	
				140					145					150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	
				155					160					165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	
				170					175					180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	
				185					190					195	
Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val	
				200					205					210	
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val	
				215					220					225	
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu	
				230					235					240	
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr	
				245					250					255	
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro	
				260					265					270	
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu	
				275					280					285	
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn	

	290	295	300
Leu Thr His Thr	Phe Arg Asp Pro Gly	Asp Tyr Cys Phe Ser	Ile
	305	310	315
Arg Ala Glu Asn	Ile Ile Ser Lys Thr	His Gln Tyr His Lys	Ile
	320	325	330
Gln Val Trp Pro	Ser Arg Ile Gln Pro	Ala Val Phe Ala Phe	Pro
	335	340	345
Cys Ala Thr Leu	Ile Thr Val Met Leu	Ala Phe Ile Met Tyr	Met
	350	355	360
Thr Leu Arg Asn	Ala Thr Gln Gln Lys	Asp Met Val Glu Asn	Pro
	365	370	375
Glu Pro Pro Ser	Gly Val Arg Cys Cys	Cys Gln Met Cys Cys	Gly
	380	385	390
Pro Phe Leu Leu	Glu Thr Pro Ser Glu	Tyr Leu Glu Ile Val	Arg
	395	400	405
Glu Asn His Gly	Leu Leu Pro Pro Leu	Tyr Lys Ser Val Lys	Thr
	410	415	420

Tyr Thr Val

<210> 242

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 242

catttcctta ccctggaccc agctcc 26

<210> 243

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 243

gaaaggccca cagcacatct ggcag 25

<210> 244

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



<400> 244  
ccacgacccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245

<211> 485

<212> DNA

<213> Homo sapiens

<400> 245

gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50  
gctcccagat ctggggccgct tgcctcctgc tectectect cctcgccagc 100  
ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150  
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200  
agaggcgaag gaggcgagac acccacttcc ccatctgcat tttctgctgc 250  
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300  
acctgccctg cccccgtccc ctcccttctt tatttattcc tgctgcccc 350  
gaacataggt cttggaataa aatggctggg tcttttgttt tccaaaaaaa 400  
aaaaaaaaaa aaaaaa taaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246

<211> 84

<212> PRT

<213> Homo sapiens

<400> 246

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Leu	Leu	Leu	Ala	Ser	Leu	Thr	Ser	Gly	Ser	Val	Phe	Pro	Gln	Gln
				20					25					30
Thr	Gly	Gln	Leu	Ala	Glu	Leu	Gln	Pro	Gln	Asp	Arg	Ala	Gly	Ala
				35					40					45
Arg	Ala	Ser	Trp	Met	Pro	Met	Phe	Gln	Arg	Arg	Arg	Arg	Arg	Asp
				50					55					60
Thr	His	Phe	Pro	Ile	Cys	Ile	Phe	Cys	Cys	Gly	Cys	Cys	His	Arg
				65					70					75
Ser	Lys	Cys	Gly	Met	Cys	Cys	Lys	Thr						
				80										

<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

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agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcaccct 150  
ccttctcggtt ttcacatag tgccagccat ttttggagtc tcctttggta 200  
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250  
ttgagaatgg agcgaggagc caaggagaag aaccaccagc tttacaagcc 300  
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350  
tcaaagagat tcgtcgaagt ggtagtagta aggtctgga caacactcca 400  
gagttcgagc tctctgacat tttctacttt tgccggaaag gaatggagac 450  
cattatggat gatgaggtga caaagagatt ctcagcagaa gaactggagt 500  
cctggaacct gctgagcaga accaattata acttcagta catcagcctt 550  
cggtcacgg tcttgtgggg gttaggagtg ctgattcggg actgctttct 600  
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 cggcctcaac atcgccccca gccttgagagc tctgcagaca tgataggaag 1950  
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<210> 248  
 <211> 456  
 <212> PRT  
 <213> Homo sapiens

<400> 248  
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 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu  
 35 40 45  
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg  
 50 55 60  
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro  
 65 70 75

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu		80	85	90
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp		95	100	105
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg		110	115	120
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe		125	130	135
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn		140	145	150
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly		155	160	165
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile		170	175	180
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr		185	190	195
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser		200	205	210
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu		215	220	225
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn		230	235	240
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile		245	250	255
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His		260	265	270
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys		275	280	285
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu		290	295	300
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu		305	310	315
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser		320	325	330
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val		335	340	345
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe		350	355	360
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met				

	365	370	375
Met Thr Ser Trp	Ala Ile Val Cys Ser	Val Trp Tyr Leu Pro	Pro
	380	385	390
Met Thr Arg Glu	Ala Asp Glu Asp Ala	Val Gln Phe Ala Asn	Arg
	395	400	405
Val Lys Ser Ala	Ile Ala Arg Gln Gly	Gly Leu Val Asp Leu	Leu
	410	415	420
Trp Asp Gly Gly	Leu Lys Arg Glu Lys	Val Lys Asp Thr Phe	Lys
	425	430	435
Glu Glu Gln Gln	Lys Leu Tyr Ser Lys	Met Ile Val Gly Asn	His
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Lys Asp Arg Ser	Arg Ser		
	455		

<210> 249

<211> 1103

<212> DNA

<213> Homo sapiens

<400> 249

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catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgtgg 200
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<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

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His	Thr	Trp	Gln	Ala	Gln	Ala	Val	Pro	Thr	Ile	Leu	Pro	Leu	Gly	20	25	30	
Leu	Ala	Pro	Asp	Thr	Phe	Asp	Asp	Thr	Tyr	Val	Gly	Cys	Ala	Glu	35	40	45	
Glu	Met	Glu	Glu	Lys	Ala	Ala	Pro	Leu	Leu	Lys	Glu	Glu	Met	Ala	50	55	60	
His	His	Ala	Leu	Leu	Arg	Glu	Ser	Trp	Glu	Ala	Ala	Gln	Glu	Thr	65	70	75	
Trp	Glu	Asp	Lys	Arg	Arg	Gly	Leu	Thr	Leu	Pro	Pro	Gly	Phe	Lys	80	85	90	
Ala	Gln	Asn	Gly	Ile	Ala	Ile	Met	Val	Tyr	Thr	Asn	Ser	Ser	Asn	95	100	105	
Thr	Leu	Tyr	Trp	Glu	Leu	Asn	Gln	Ala	Val	Arg	Thr	Gly	Gly	Gly	110	115	120	
Ser	Arg	Glu	Leu	Tyr	Met	Arg	His	Phe	Pro	Phe	Lys	Ala	Leu	His	125	130	135	
Phe	Tyr	Leu	Ile	Arg	Ala	Leu	Gln	Leu	Leu	Arg	Gly	Ser	Gly	Gly	140	145	150	
Cys	Ser	Arg	Gly	Pro	Gly	Glu	Val	Val	Phe	Arg	Gly	Val	Gly	Ser	155	160	165	
Leu	Arg	Phe	Glu	Pro	Lys	Arg	Leu	Gly	Asp	Ser	Val	Arg	Leu	Gly	170	175	180	
Gln	Phe	Ala	Ser	Ser	Ser	Leu	Asp	Lys	Ala	Val	Ala	His	Arg	Phe	185	190	195	

Gly	Glu	Lys	Arg	Arg	Gly	Cys	Val	Ser	Ala	Pro	Gly	Val	Gln	Leu
				200					205					210
Gly	Ser	Gln	Ser	Glu	Gly	Ala	Ser	Ser	Leu	Pro	Pro	Trp	Lys	Thr
				215					220					225
Leu	Leu	Leu	Ala	Pro	Gly	Glu	Phe	Gln	Leu	Ser	Gly	Val	Gly	Pro
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<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

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<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

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caacatgect caccctcatc tatatccttt ggcagctcac agggtcagca 100

gcctctggac ccgtgaaaga gctggtcggt tccgttggtg gggccgtgac 150

tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacaaac ccctcttgtc accatacagc cagaaggggg cactatcata 250

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ctccctgaag ctgagcaaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400

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gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500

atgggggaaga ggatgtgatt tatacctgga aggcctggg gcaagcagcc 550

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tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700

ccagattcct ccattggtcct cctgtgtctc ctggttggtc ccctcctgct 750

cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800

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tcacactaat agaacaatcc taaaggaaga tccagcaaatt acgggtttact 950  
ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000  
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<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met	Ala	Gly	Ser	Pro	Thr	Cys	Leu	Thr	Leu	Ile	Tyr	Ile	Leu	Trp	1	5	10	15
Gln	Leu	Thr	Gly	Ser	Ala	Ala	Ser	Gly	Pro	Val	Lys	Glu	Leu	Val	20	25	30	
Gly	Ser	Val	Gly	Gly	Ala	Val	Thr	Phe	Pro	Leu	Lys	Ser	Lys	Val	35	40	45	
Lys	Gln	Val	Asp	Ser	Ile	Val	Trp	Thr	Phe	Asn	Thr	Thr	Pro	Leu	50	55	60	
Val	Thr	Ile	Gln	Pro	Glu	Gly	Gly	Thr	Ile	Ile	Val	Thr	Gln	Asn	65	70	75	
Arg	Asn	Arg	Glu	Arg	Val	Asp	Phe	Pro	Asp	Gly	Gly	Tyr	Ser	Leu	80	85	90	
Lys	Leu	Ser	Lys	Leu	Lys	Lys	Asn	Asp	Ser	Gly	Ile	Tyr	Tyr	Val	95	100	105	
Gly	Ile	Tyr	Ser	Ser	Ser	Leu	Gln	Gln	Pro	Ser	Thr	Gln	Glu	Tyr	110	115	120	
Val	Leu	His	Val	Tyr	Glu	His	Leu	Ser	Lys	Pro	Lys	Val	Thr	Met	125	130	135	
Gly	Leu	Gln	Ser	Asn	Lys	Asn	Gly	Thr	Cys	Val	Thr	Asn	Leu	Thr	140	145	150	
Cys	Cys	Met	Glu	His	Gly	Glu	Glu	Asp	Val	Ile	Tyr	Thr	Trp	Lys	155	160	165	
Ala	Leu	Gly	Gln	Ala	Ala	Asn	Glu	Ser	His	Asn	Gly	Ser	Ile	Leu	170	175	180	
Pro	Ile	Ser	Trp	Arg	Trp	Gly	Glu	Ser	Asp	Met	Thr	Phe	Ile	Cys	185	190	195	
Val	Ala	Arg	Asn	Pro	Val	Ser	Arg	Asn	Phe	Ser	Ser	Pro	Ile	Leu				



200	205	210
Ala Arg Lys Leu Cys Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser	
215	220	225
Met Val Leu Leu Cys Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu	
230	235	240
Phe Val Leu Gly Leu Phe Leu Trp Phe	Leu Lys Arg Glu Arg Gln	
245	250	255
Glu Glu Tyr Ile Glu Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu	
260	265	270
Thr Pro Asn Ile Cys Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp	
275	280	285
Thr Ile Pro His Thr Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala	
290	295	300
Asn Thr Val Tyr Ser Thr Val Glu Ile	Pro Lys Lys Met Glu Asn	
305	310	315
Pro His Ser Leu Leu Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala	
320	325	330
Tyr Glu Asn Val Ile		
335		

<210> 254  
 <211> 1053  
 <212> DNA  
 <213> Homo sapiens

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 ggccgtgact tccccctga agtccaaagt aaagcaagtt gactctattg 150  
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 actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250  
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 tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccag 350  
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 caagcagcca atgagtccca taatgggtcc atcctcccca tctcctggag 550  
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 cctcctgctc agtctctttg tactggggct atttctttgg tttctgaaga 750  
 gagagagaca agaagagtac attgaagaga agaagagagt ggacatttgt 800  
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 cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900  
 cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950  
 ctgctcacga tgccagacac accaaggcta tttgcctatg agaatgttat 1000  
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 aaa 1053

<210> 255  
 <211> 860  
 <212> DNA  
 <213> Homo sapiens

<400> 255  
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 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150  
 gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200  
 acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250  
 ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300  
 tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350  
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400  
 ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450  
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500  
 tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550  
 tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600  
 gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650  
 tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700  
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750  
 acctcatcaa gaatcaaaga cttcttttaa tttctctttg atacaccctt 800

gacaatTTTT catgaaatta ttcctcttcc tgttcaataa atgattaccc 850

ttgcacttaa 860

<210> 256

<211> 180

<212> PRT

<213> Homo sapiens

<400> 256

Met	Lys	Met	Leu	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Thr	Leu	Val	Cys
1				5					10					15

Val	His	Ala	Glu	Glu	Ala	Ser	Ser	Thr	Gly	Arg	Asn	Phe	Asn	Val
			20						25					30

Glu	Lys	Ile	Asn	Gly	Glu	Trp	His	Thr	Ile	Ile	Leu	Ala	Ser	Asp
			35						40					45

Lys	Arg	Glu	Lys	Ile	Glu	Glu	His	Gly	Asn	Phe	Arg	Leu	Phe	Leu
			50						55					60

Glu	Gln	Ile	His	Val	Leu	Glu	Asn	Ser	Leu	Val	Leu	Lys	Val	His
			65						70					75

Thr	Val	Arg	Asp	Glu	Glu	Cys	Ser	Glu	Leu	Ser	Met	Val	Ala	Asp
			80						85					90

Lys	Thr	Glu	Lys	Ala	Gly	Glu	Tyr	Ser	Val	Thr	Tyr	Asp	Gly	Phe
			95						100					105

Asn	Thr	Phe	Thr	Ile	Pro	Lys	Thr	Asp	Tyr	Asp	Asn	Phe	Leu	Met
			110						115					120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
			125						130					135

Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
			140						145					150

Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
			155						160					165

Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
			170						175					180

<210> 257

<211> 766

<212> DNA

<213> Homo sapiens

<400> 257

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ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150

tctcaaaacc ccatctcttg ctttgagtgg tggttcccag gaattatagg 200  
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agtgtgatca cagtcattgg tgctctgtat tgcattgtga tatccatcca 350  
ggctctctta aaaggtcctc tcatgtgtaa ttctccaagc aacagtaatg 400  
ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450  
ttcaacttgc agtgggtttt caatgactct tgtgcacctc ctactgggtt 500  
caataaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550  
gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600  
gtatttttag gtctattgct tgttggaatt ctggaggtcc tgtttgggct 650  
cagtcagata gtcacgggtt tccttggtg tctgtgtgga gtctctaagc 700  
gaagaagtca aattgtgtag tttaatggga ataaatgta agtatcagta 750  
gtttgaaaaa aaaaaa 766

<210> 258

<211> 229

<212> PRT

<213> Homo sapiens

<400> 258

Met	Thr	Cys	Cys	Glu	Gly	Trp	Thr	Ser	Cys	Asn	Gly	Phe	Ser	Leu	1	5	10	15
Leu	Val	Leu	Leu	Leu	Leu	Gly	Val	Val	Leu	Asn	Ala	Ile	Pro	Leu	20	25	30	
Ile	Val	Ser	Leu	Val	Glu	Glu	Asp	Gln	Phe	Ser	Gln	Asn	Pro	Ile	35	40	45	
Ser	Cys	Phe	Glu	Trp	Trp	Phe	Pro	Gly	Ile	Ile	Gly	Ala	Gly	Leu	50	55	60	
Met	Ala	Ile	Pro	Ala	Thr	Thr	Met	Ser	Leu	Thr	Ala	Arg	Lys	Arg	65	70	75	
Ala	Cys	Cys	Asn	Asn	Arg	Thr	Gly	Met	Phe	Leu	Ser	Ser	Phe	Phe	80	85	90	
Ser	Val	Ile	Thr	Val	Ile	Gly	Ala	Leu	Tyr	Cys	Met	Leu	Ile	Ser	95	100	105	
Ile	Gln	Ala	Leu	Leu	Lys	Gly	Pro	Leu	Met	Cys	Asn	Ser	Pro	Ser	110	115	120	
Asn	Ser	Asn	Ala	Asn	Cys	Glu	Phe	Ser	Leu	Lys	Asn	Ile	Ser	Asp	125	130	135	

Ile	His	Pro	Glu	Ser	Phe	Asn	Leu	Gln	Trp	Phe	Phe	Asn	Asp	Ser
				140					145					150
Cys	Ala	Pro	Pro	Thr	Gly	Phe	Asn	Lys	Pro	Thr	Ser	Asn	Asp	Thr
				155					160					165
Met	Ala	Ser	Gly	Trp	Arg	Ala	Ser	Ser	Phe	His	Phe	Asp	Ser	Glu
				170					175					180
Glu	Asn	Lys	His	Arg	Leu	Ile	His	Phe	Ser	Val	Phe	Leu	Gly	Leu
				185					190					195
Leu	Leu	Val	Gly	Ile	Leu	Glu	Val	Leu	Phe	Gly	Leu	Ser	Gln	Ile
				200					205					210
Val	Ile	Gly	Phe	Leu	Gly	Cys	Leu	Cys	Gly	Val	Ser	Lys	Arg	Arg
				215					220					225

Ser Gln Ile Val

<210> 259  
 <211> 434  
 <212> DNA  
 <213> Homo sapiens

<400> 259  
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 gctaccaggc ccattgctctt gtctgcccag ctgttgcttc tgagatcaca 150  
 gtctttcttat tcttaagtga cgctgcggta aacctccaag ttgccaaact 200  
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250  
 ccgatcagat atcttttaag aaacgactct cattgaaaaa gtcctgggtg 300  
 aaatagttaa aaaatgtggt gtgtgacatg taaaaatgct caacctgggt 350  
 tccaaagtct ttcaacgaca ccctgatctt cactaaaaat tgtaaagggt 400  
 tcaacacggt gctttaataa atcacttgcc ctgc 434

<210> 260  
 <211> 83  
 <212> PRT  
 <213> Homo sapiens

<400> 260  
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 Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu  
 20 25 30  
 Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln

	35		40		45
Val	Ala	Lys	Leu	Asn	Pro
				Pro	Pro
				Glu	Ala
				Leu	Ala
				Lys	Leu
				50	55
					60
Glu	Val	Lys	His	Cys	Thr
				Asp	Gln
				Ile	Ser
				Phe	Lys
				Lys	Arg
				Leu	
				65	70
					75
Ser	Leu	Lys	Lys	Ser	Trp
				Trp	Lys
				80	

<210> 261  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<400> 261  
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 ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150  
 cgccccagtg cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200  
 agagagtgac cctggccctt cctctactgg caggcctgac tgccttgga 250  
 gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300  
 aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350  
 ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400  
 cagcacagtc ctgtacctga gaaggccatc ccactcatca ctccaggctc 450  
 tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500  
 taactactggc ccccagcacc tcctcccctg ggaggcctta tcctcaagga 550  
 aggacttctc tccaagggca ggctgttagg cccctttctg atcaggaggc 600  
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<210> 262  
 <211> 89  
 <212> PRT  
 <213> Homo sapiens

<400> 262  
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 1 5 10 15  
 Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe  
 20 25 30  
 Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly  
 35 40 45

Gly	Leu	Leu	Ala	Ile	Ala	Gly	Ile	Ala	Ala	Val	Leu	Ser	Gly	Lys
				50					55					60
Cys	Lys	Tyr	Lys	Ser	Ser	Gln	Lys	Gln	His	Ser	Pro	Val	Pro	Glu
				65					70					75
Lys	Ala	Ile	Pro	Leu	Ile	Thr	Pro	Gly	Ser	Ala	Thr	Thr	Cys	
				80					85					

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

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ggacctatgc cttctataac aactgccgc ggctccagtg tttccacag 200
ccccaaaac ggaactggtt ttggggtcac ctgggcctga tcaactctac 250
agaggagggc ttgaaggact cgaccagat gtcggcca tc tattccagg 300
gctttacggt atggtgggt cccatcatcc ccttcacgt tttatgccac 350
cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcaccaa 400
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cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700
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agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800
cggcgcttcc acagggcctg ccgcctgggt catgacttca cagacgctgt 850
catccgggag cggcgtcgca cctccccac tcagggtatt gatgattttt 900
tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950
ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
agaggctgac accttcattg ttggaggcca tgacaccacg gccagtggcc 1050
tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100

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tgccgacagg aggtgcaaga gcttctgaag gaccgcgata ctaaagagat 1150  
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 agagcctgag gttacatccc ccagctccct tcatctcccg atgctgcacc 1250  
 caggacattg ttctcccaga tggccgagtc atccccaaag gcattacctg 1300  
 cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350  
 ctgaggtcta cgacccttc cgctttgacc cagagaacag caaggggagg 1400  
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 ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agcccctgaa 1600  
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<210> 264

<211> 5'1

<212> PRT

<213> Homo sapiens

<400> 264

Met	Ser	Leu	Leu	Ser	Leu	Pro	Trp	Leu	Gly	Leu	Arg	Pro	Val	Ala	1	5	10	15
Met	Ser	Pro	Trp	Leu	Leu	Leu	Leu	Leu	Val	Val	Gly	Ser	Trp	Leu	20	25	30	
Leu	Ala	Arg	Ile	Leu	Ala	Trp	Thr	Tyr	Ala	Phe	Tyr	Asn	Asn	Cys	35	40	45	
Arg	Arg	Leu	Gln	Cys	Phe	Pro	Gln	Pro	Pro	Lys	Arg	Asn	Trp	Phe	50	55	60	
Trp	Gly	His	Leu	Gly	Leu	Ile	Thr	Pro	Thr	Glu	Glu	Gly	Leu	Lys	65	70	75	
Asp	Ser	Thr	Gln	Met	Ser	Ala	Thr	Tyr	Ser	Gln	Gly	Phe	Thr	Val	80	85	90	
Trp	Leu	Gly	Pro	Ile	Ile	Pro	Phe	Ile	Val	Leu	Cys	His	Pro	Asp	95	100	105	
Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys	110	115	120	
Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly	125	130	135	
Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met				



				140					145					150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr
				155					160					165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His
				170					175					180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile
				185					190					195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe
				200					205					210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile
				215					220					225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu
				230					235					240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg
				245					250					255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val
				260					265					270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp
				275					280					285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp
				290					295					300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp
				305					310					315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His
				320					325					330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala
				335					340					345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu
				350					355					360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu
				365					370					375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg
				380					385					390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp
				395					400					405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys
				410					415					420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro
				425					430					435

Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser
				440					445				450	
Lys	Gly	Arg	Ser	Pro	Leu	Ala	Phe	Ile	Pro	Phe	Ser	Ala	Gly	Pro
				455					460				465	
Arg	Asn	Cys	Ile	Gly	Gln	Ala	Phe	Ala	Met	Ala	Glu	Met	Lys	Val
				470					475				480	
Val	Leu	Ala	Leu	Met	Leu	Leu	His	Phe	Arg	Phe	Leu	Pro	Asp	His
				485					490				495	
Thr	Glu	Pro	Arg	Arg	Lys	Leu	Glu	Leu	Ile	Met	Arg	Ala	Glu	Gly
				500					505				510	
Gly	Leu	Trp	Leu	Arg	Val	Glu	Pro	Leu	Asn	Val	Gly	Leu	Gln	
				515					520					

<210> 265

<211> 584

<212> DNA

<213> Homo sapiens

<400> 265

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tcttcctctc cttgactcca gggaaatata ctttcaactc tcagcacctc 150
atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
cagatattgc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
agcagactca agtaccaaca tttttaaccc aagaggaaat ttgagaaagt 300
ttcaggattt ctctggacaa gatcctaaca ttttactgag tcattctttg 350
gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400
gaaatactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450
acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagt 500
tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

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<210> 266

<211> 124

<212> PRT

<213> Homo sapiens

<400> 266

Met	Tyr	Lys	Leu	Ala	Ser	Cys	Cys	Leu	Leu	Phe	Thr	Gly	Phe	Leu
1					5					10				15

Asn	Pro	Leu	Leu	Ser	Leu	Pro	Leu	Leu	Asp	Ser	Arg	Glu	Ile	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	20		25		30									
Phe	Gln	Leu	Ser	Ala	Pro	His	Glu	Asp	Ala	Arg	Leu	Thr	Pro	Glu
			35						40					45
Glu	Leu	Glu	Arg	Ala	Ser	Leu	Leu	Gln	Ile	Leu	Pro	Glu	Met	Leu
			50						55					60
Gly	Ala	Glu	Arg	Gly	Asp	Ile	Leu	Arg	Lys	Ala	Asp	Ser	Ser	Thr
			65						70					75
Asn	Ile	Phe	Asn	Pro	Arg	Gly	Asn	Leu	Arg	Lys	Phe	Gln	Asp	Phe
			80						85					90
Ser	Gly	Gln	Asp	Pro	Asn	Ile	Leu	Leu	Ser	His	Leu	Leu	Ala	Arg
			95						100					105
Ile	Trp	Lys	Pro	Tyr	Lys	Lys	Arg	Glu	Thr	Pro	Asp	Cys	Phe	Trp
			110						115					120

Lys Tyr Cys Val

<210> 267  
 <211> 654  
 <212> DNA  
 <213> Homo sapiens

<400> 267  
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 taaggacctg acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150  
 acctgtctgc aaccagctg aggccatgcc ctcccagggt accgtctgca 200  
 gcctcctgct cctcggtatg ctctggctgg acttggccat ggcaggctcc 250  
 agcttctctga gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300  
 gaagccacca gccaaagctgc agccccagagc tctagcaggc tggctccgcc 350  
 cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400  
 ttcaacgccc cctttgatgt tggaatcaag ctgtcagggg ttcagtacca 450  
 gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500  
 aggccaaaga ggccccagcc gacaagtgat cgccacaag ccttactcac 550  
 ctctctctaa gtttagaagc gctcatctgg cttttcgctt gcttctgcag 600  
 caactcccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650  
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<210> 268

<211> 117

<212> PRT

<213> Homo sapiens

<400> 268

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 1          5          10          15

Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
          20          25          30

Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
          35          40          45

Ala Lys Leu Gln Pro Arg Ala Leu Ala Gly Trp Leu Arg Pro Glu
          50          55          60

Asp Gly Gly Gln Ala Glu Gly Ala Glu Asp Glu Leu Glu Val Arg
          65          70          75

Phe Asn Ala Pro Phe Asp Val Gly Ile Lys Leu Ser Gly Val Gln
          80          85          90

Tyr Gln Gln His Ser Gln Ala Leu Gly Lys Phe Leu Gln Asp Ile
          95          100         105

Leu Trp Glu Glu Ala Lys Glu Ala Pro Ala Asp Lys
          110          115
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<210> 269

<211> 1332

<212> DNA

<213> Homo sapiens

<400> 269

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cagaccctga tagtcgtgat catcgggatg ctcgtgctcc tgcctggactt 200
tcttggettg gtgcacctgg gccagctgct catcttccac atctacctga 250
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gctgctcatc ttacacctct acttgagtat gtccctaacc ctgagcccc 350
cacgcctggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400
cagcctctcc cagaagtgag atcatggaca aaaagggcaa atcacaggaa 450
gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
gccgagacct gcaggagtgg tgccagggtc ttgaagtaac aagtttaaaa 550
tggttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
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aaataaggac aggtggactt ccaaaaacac aagtagaat tctaacaatg 650  
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 tgtggtcttg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750  
 gttgctgaac gacggagggt aaactcccca gcccgaagaa aacctgtgtt 800  
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 gctgtggcct ctcaggggggt ttctgtggac acgggcagca gagtgtgtcc 950  
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 tcagggcaga gggagttggg tgggtcaggc tctgggctca cctccatctc 1050  
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 acacacccca ccaagagcct ccttgttcat aaccacaggt taccctacaa 1150  
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200  
 cgcatactct acagtcactg ttgtcttgcc tgagggttga atttttttta 1250  
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270

<211> 142

<212> PRT

<213> Homo sapiens

<400> 270

Met	Asn	Thr	Trp	Leu	Leu	Phe	Leu	Pro	Leu	Phe	Pro	Val	Gln	Val
1				5					10					15
Gln	Thr	Leu	Ile	Val	Val	Ile	Ile	Gly	Met	Leu	Val	Leu	Leu	Leu
				20					25					30
Asp	Phe	Leu	Gly	Leu	Val	His	Leu	Gly	Gln	Leu	Leu	Ile	Phe	His
				35					40					45
Ile	Tyr	Leu	Ser	Met	Ser	Pro	Thr	Leu	Ser	Pro	Arg	Ser	Pro	Gln
				50					55					60
Gly	Trp	Val	Val	Arg	Ala	Ala	His	Leu	Thr	Pro	Leu	Leu	Glu	Tyr
				65					70					75
Val	Pro	Asn	Pro	Glu	Pro	Pro	Thr	Pro	Gly	Ala	Arg	Val	Phe	Val
				80					85					90
Pro	Arg	Val	Arg	Met	Cys	Ser	Gly	Ser	Ala	Ser	Pro	Arg	Ser	Glu
				95					100					105
Ile	Met	Asp	Lys	Lys	Gly	Lys	Ser	Gln	Glu	Glu	Ile	Lys	Ser	Met

[illegible]

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 acgtctgctg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250  
 atgggttttta gaggctacga ataaggctat gaataagggt tatctttaag 1300  
 tcctaaggga ttcctgggtg ccactgctct cttttcctct acagctccat 1350  
 cttgtttcac ccacccaca tctcacacat ccagaattcc cttctttact 1400  
 gatagtttct gtgccagggt ctgggctaaa ccatggagat aaaaagaaga 1450  
 gtaaaatata cttcccgacc ttaaggatct gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

Met	Ala	Lys	Met	Glu	Leu	Ser	Lys	Ala	Phe	Ser	Gly	Gln	Arg	Thr	1	5	10	15
Leu	Leu	Ser	Ala	Ile	Leu	Ser	Met	Leu	Ser	Leu	Ser	Phe	Ser	Thr	20	25	30	
Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val	35	40	45	
Pro	Lys	Pro	Leu	Cys	Glu	Lys	Gly	Leu	Ala	Ala	Lys	Cys	Phe	Asp	50	55	60	
Met	Pro	Val	Ser	Leu	Asp	Gly	Asp	Thr	Asn	Thr	Ser	Thr	Gln	Glu	65	70	75	
Val	Val	Gln	Tyr	Asn	Trp	Glu	Thr	Gly	Asp	Asp	Arg	Phe	Ser	Phe	80	85	90	
Arg	Ser	Phe	Arg	Ser	Gly	Met	Trp	Leu	Ser	Cys	Glu	Glu	Thr	Val	95	100	105	
Glu	Glu	Pro	Gly	Glu	Arg	Cys	Arg	Ser	Phe	Ile	Glu	Leu	Thr	Pro	110	115	120	
Pro	Ala	Lys	Arg	Gly	Glu	Lys	Gly	Leu	Leu	Glu	Phe	Ala	Thr	Leu	125	130	135	
Gln	Gly	Pro	Cys	His	Pro	Thr	Leu	Arg	Phe	Gly	Gly	Lys	Arg	Leu	140	145	150	
Met	Glu	Lys	Ala	Ser	Leu	Pro	Ser	Pro	Pro	Leu	Gly	Leu	Cys	Gly	155	160	165	
Lys	Asn	Pro	Met	Val	Ile	Pro	Gly	Asn	Ala	Asp	His	Leu	His	Arg	170	175	180	

Thr	Ser	Ile	His	Gln	Leu	Pro	Pro	Ala	Thr	Asn	Arg	Leu	Ala	Thr
				185					190					195
His	Trp	Glu	Pro	Cys	Leu	Trp	Ala	Gln	Thr	Glu	Arg	Leu	Cys	Cys
				200					205					210
Cys	Phe	Leu	Cys	Pro	Val	Arg	Ser	Pro	Gly	Asp	Gly	Gly	Pro	His
				215					220					225
Asp	Val	Phe	Thr	Ser	Leu	Pro	Ser	Asp	Cys	Gln	Leu	Gly	Ser	Arg
				230					235					240
Arg	Leu	Glu	Thr	Thr	Cys	Leu	Glu	Leu	Trp	Leu	Gly	Leu	Leu	His
				245					250					255
Gly	Leu	Ala	Leu	Leu	His	Leu	Leu	His	Gly	Val	Gly	Cys	His	His
				260					265					270
Leu	Gln	His	Val	His	Gln	Asp	Gly	Ala	Gly	Val	Gln	Val	Gln	Ala
				275					280					285

<210> 273

<211> 1158

<212> DNA

<213> Homo sapiens

<400> 273

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ctctggtagc cttcagagca aacaggacaa cctatgttat ggatgtttcc 200
accaaccagg gtagtggcat ggagcacctg aaccatctgt gcttctgtga 250
tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300
atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350
cctgccctat tctcctccc aagtctgttc tcttattgtc aacctcagca 400
caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450
tgggcagatt accatgcaag ccccaggaga aatggaggag cttttagacc 500
acctccctgt cagccagtat taacatgtcc ccttccccct gccccgccgt 550
agattcagga cattcgcccc tgtgtgccac caaaccagga ctttccccct 600
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gggcagtgta gcatctttca agctccgtta ctatggcgat ggccatgatg 700
ttacaatccc acttgctga ataatacaagt gggaagggga agcagaggga 750
aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgaggaaaa 800

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accaaagga agcaacagga acttctgcaa ctggttttta tcggaaagat 850  
 catcctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900  
 agattgatga aagtgcaggt gtgtaaggaa atagaacagt ctgctgggag 950  
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtcact 1000  
 cagcctcccc gtagccatct ccagggtgac ggaaccagt gtattacctg 1050  
 ctggaaccaa ggaaactaac aatgtaggtt actagtgaat accccaatgg 1100  
 tttctccaat tatgcccatt ccaccaaacc aataaaacaa aattctctaa 1150  
 cactgaaa 1158

<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

Met	Trp	Leu	Pro	Leu	Gly	Leu	Leu	Ser	Leu	Cys	Leu	Ser	Pro	Leu
1				5					10					15
Pro	Ile	Leu	Ser	Ser	Pro	Ser	Leu	Lys	Ser	Gln	Ala	Cys	Gln	Gln
				20					25					30
Leu	Leu	Trp	Thr	Leu	Pro	Ser	Pro	Leu	Val	Ala	Phe	Arg	Ala	Asn
				35					40					45
Arg	Thr	Thr	Tyr	Val	Met	Asp	Val	Ser	Thr	Asn	Gln	Gly	Ser	Gly
				50					55					60
Met	Glu	His	Arg	Asn	His	Leu	Cys	Phe	Cys	Asp	Leu	Tyr	Asp	Arg
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Ala	Thr	Ser	Pro	Pro	Leu	Lys	Cys	Ser	Leu	Leu				
				80					85					

<210> 275

<211> 2694

<212> DNA

<213> Homo sapiens

<400> 275

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<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

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			20					25						30
Asn	Lys	Tyr	Trp	Pro	Leu	Phe	Val	Leu	Phe	Phe	Tyr	Ile	Leu	Ser
				35				40						45
Pro	Ile	Pro	Tyr	Cys	Ile	Ala	Arg	Arg	Leu	Val	Asp	Asp	Thr	Asp
				50				55						60
Ala	Met	Ser	Asn	Ala	Cys	Lys	Glu	Leu	Ala	Ile	Phe	Leu	Thr	Thr
				65				70						75

Gly	Ile	Val	Val	Ser	Ala	Phe	Gly	Leu	Pro	Ile	Val	Phe	Ala	Arg
				80					85					90
Ala	His	Leu	Ile	Glu	Trp	Gly	Ala	Cys	Ala	Leu	Val	Leu	Thr	Gly
				95					100					105
Asn	Thr	Val	Ile	Phe	Ala	Thr	Ile	Leu	Gly	Phe	Phe	Leu	Val	Phe
				110					115					120
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<210> 277

<211> 4104

<212> DNA

<213> Homo sapiens

<400> 277

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<210> 278

<211> 522

<212> PRT

<213> Homo sapiens

<400> 278

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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln	20	25	30	
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	35	40	45	
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	50	55	60	
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	65	70	75	
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	80	85	90	
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	95	100	105	
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	110	115	120	
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	125	130	135	
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	140	145	150	
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	155	160	165	
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	170	175	180	
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	185	190	195	
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	200	205	210	

Leu Thr Glu Leu His Leu Glu His Asn Asp Leu Val Lys Val Asn	215	220	225
Phe Ala His Phe Pro Arg Leu Ile Ser Leu His Ser Leu Cys Leu	230	235	240
Arg Arg Asn Lys Val Ala Ile Val Val Ser Ser Leu Asp Trp Val	245	250	255
Trp Asn Leu Glu Lys Met Asp Leu Ser Gly Asn Glu Ile Glu Tyr	260	265	270
Met Glu Pro His Val Phe Glu Thr Val Pro His Leu Gln Ser Leu	275	280	285
Gln Leu Asp Ser Asn Arg Leu Thr Tyr Ile Glu Pro Arg Ile Leu	290	295	300
Asn Ser Trp Lys Ser Leu Thr Ser Ile Thr Leu Ala Gly Asn Leu	305	310	315
Trp Asp Cys Gly Arg Asn Val Cys Ala Leu Ala Ser Trp Leu Ser	320	325	330
Asn Phe Gln Gly Arg Tyr Asp Gly Asn Leu Gln Cys Ala Ser Pro	335	340	345
Glu Tyr Ala Gln Gly Glu Asp Val Leu Asp Ala Val Tyr Ala Phe	350	355	360
His Leu Cys Glu Asp Gly Ala Glu Pro Thr Ser Gly His Leu Leu	365	370	375
Ser Ala Val Thr Asn Arg Ser Asp Leu Gly Pro Pro Ala Ser Ser	380	385	390
Ala Thr Thr Leu Ala Asp Gly Gly Glu Gly Gln His Asp Gly Thr	395	400	405
Phe Glu Pro Ala Thr Val Ala Leu Pro Gly Gly Glu His Ala Glu	410	415	420
Asn Ala Val Gln Ile His Lys Val Val Thr Gly Thr Met Ala Leu	425	430	435
Ile Phe Ser Phe Leu Ile Val Val Leu Val Leu Tyr Val Ser Trp	440	445	450
Lys Cys Phe Pro Ala Ser Leu Arg Gln Leu Arg Gln Cys Phe Val	455	460	465
Thr Gln Arg Arg Lys Gln Lys Gln Lys Gln Thr Met His Gln Met	470	475	480
Ala Ala Met Ser Ala Gln Glu Tyr Tyr Val Asp Tyr Lys Pro Asn	485	490	495
His Ile Glu Gly Ala Leu Val Ile Ile Asn Glu Tyr Gly Ser Cys			



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Thr Cys His Gln Gln Pro Ala Arg Glu Cys Glu Val			
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<210> 279  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 279  
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<210> 280  
 <211> 709  
 <212> DNA  
 <213> Homo sapiens

<400> 280  
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<210> 281  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 281

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				20					25					30	
Asp	Val	Ala	Ala	Asn	Trp	Ser	Gln	Asn	Arg	Thr	Pro	Cys	Ala	Gly	
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Gly	Ala	Val	Glu	Phe	Pro	Ala	Asp	Lys	Met	Val	Ser	Val	Leu	Val	
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Gln	Glu	Gly	His	Ala	Val	Ser	Asp	Met	Leu	Leu	Pro	Leu	Asp	Gly	
				65					70					75	
Glu	Leu	Val	Leu	Ala	Ser	Gly	Ala	Gly	Phe	Gly	Val	Ser	Asp	Val	
				80					85					90	
Gly	Ser	His	Leu	Asp	Cys	Gly	Ala	Gly	Glu	Pro	Ala	Val	Phe	Arg	
				95					100					105	
Asp	Ser	Asp	Arg	Phe	Ser	Trp	His	Asp	Pro	His	Leu	Trp	Arg	Ser	
				110					115					120	
Gly	Asp	Glu	Ala	Pro	Gly	Leu	Phe	Phe	Val	Asp	Ala	Glu	Arg	Val	
				125					130					135	
Pro	Cys	Arg	His	Asp	Asp	Val	Phe	Phe	Pro	Pro	Ser	Ala	Ser	Phe	
				140					145					150	
Arg	Val	Gly	Leu	Gly	Pro	Gly	Ala	Ser	Pro	Val	Arg	Val	Arg	Ser	
				155					160					165	
Ile	Ser	Ala	Leu	Gly	Arg	Thr	Phe	Thr	Arg	Asp	Glu	Asp	Leu	Ala	
				170					175					180	
Val	Phe	Leu	Ala	Ser	Arg	Ala	Gly	Arg	Leu	Arg	Phe	His	Gly	Pro	
				185					190					195	
Gly	Ala	Leu	Ser	Val	Gly	Pro	Glu	Asp	Cys	Ala	Asp	Pro	Ser	Gly	
				200					205					210	
Cys	Val	Cys	Gly	Asn	Ala	Glu	Ala	Gln	Pro	Trp	Ile	Cys	Ala	Ala	
				215					220					225	

Leu Leu Gln Pro

<210> 282

<211> 644

<212> DNA

<213> Homo sapiens

<400> 282

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<210> 283

<211> 77

<212> PRT

<213> Homo sapiens

<400> 283

Met	Gly	Pro	Val	Lys	Gln	Leu	Lys	Arg	Met	Phe	Glu	Pro	Thr	Arg
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Leu	Ile	Ala	Thr	Ile	Met	Val	Leu	Leu	Cys	Phe	Ala	Leu	Thr	Leu
				20					25					30
Cys	Ser	Ala	Phe	Trp	Trp	His	Asn	Lys	Gly	Leu	Ala	Leu	Ile	Phe
				35					40					45
Cys	Ile	Leu	Gln	Ser	Leu	Ala	Leu	Thr	Trp	Tyr	Ser	Leu	Ser	Phe
				50					55					60
Ile	Pro	Phe	Ala	Arg	Asp	Ala	Val	Lys	Lys	Cys	Phe	Ala	Val	Cys
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<210> 284

<211> 2623

<212> DNA

<213> Homo sapiens

<400> 284

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<211> 477

<212> PRT

<213> Homo sapiens

<400> 285

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Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys
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Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His
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His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	
				80					85					90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	
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Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	
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Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	
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Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	
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Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	
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Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	
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Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	
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His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	
				200					205					210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	
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Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	
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Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	
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				320					325					330	
Ser	Asp	Asp	Phe	Leu	Leu	Gly	Asn	His	Gly	Tyr	Asp	Asn	Ala	Leu	
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Ala	Asp	Met	His	Pro	Ile	Phe	Leu	Ala	His	Gly	Pro	Ala	Phe	Arg
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Lys	Asn	Phe	Ser	Lys	Glu	Ala	Met	Asn	Ser	Thr	Asp	Leu	Tyr	Pro
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Leu	Leu	Cys	His	Leu	Leu	Asn	Ile	Thr	Ala	Met	Pro	His	Asn	Gly
				380					385					390
Ser	Phe	Trp	Asn	Val	Gln	Asp	Leu	Leu	Asn	Ser	Ala	Met	Pro	Arg
				395					400					405
Val	Val	Pro	Tyr	Thr	Gln	Ser	Thr	Ile	Leu	Leu	Pro	Gly	Ser	Val
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Lys	Pro	Ala	Glu	Tyr	Asp	Gln	Glu	Gly	Ser	Tyr	Pro	Tyr	Phe	Ile
				425					430					435
Gly	Val	Ser	Leu	Gly	Ser	Ile	Ile	Val	Ile	Val	Phe	Phe	Val	Ile
				440					445					450
Phe	Ile	Lys	His	Leu	Ile	His	Ser	Gln	Ile	Pro	Ala	Leu	Gln	Asp
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<210> 286

<211> 1337

<212> DNA

<213> Homo sapiens

<400> 286

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<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

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Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp
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Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr	
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Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Ala	Pro	Asp	Val	Ala
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Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly
				80					85					90
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile
				95					100					105
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu
				110					115					120



Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala	125	130	135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe	140	145	150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser	155	160	165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val	170	175	180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe	185	190	195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala	200	205	210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu	215	220	225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala	230	235	240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp	245	250	255

<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

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<210> 289

<211> 469

<212> PRT

<213> Homo sapiens

<400> 289

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Ser	Thr	Tyr	Arg	Gln	Trp	Lys	Gln	Lys	Ile	Val	Gln	Ala	Gly	Asp	
				50					55					60	
Lys	Asp	Leu	Asp	Gly	Gln	Leu	Asp	Phe	Glu	Glu	Phe	Val	His	Tyr	
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Leu	Gln	Asp	His	Glu	Lys	Lys	Leu	Arg	Leu	Val	Phe	Lys	Ile	Leu	
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Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	
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Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	
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Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	
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Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	
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Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	
				290					295					300	
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	

	305	310	315
Tyr Ser Gly Met	Leu Asp Cys Ala Arg	Arg Ile Leu Ala Arg	Glu
	320	325	330
Gly Val Ala Ala	Phe Tyr Lys Gly Tyr	Val Pro Asn Met	Leu Gly
	335	340	345
Ile Ile Pro Tyr	Ala Gly Ile Asp Leu	Ala Val Tyr Glu Thr	Leu
	350	355	360
Lys Asn Ala Trp	Leu Gln His Tyr Ala	Val Asn Ser Ala Asp	Pro
	365	370	375
Gly Val Phe Val	Leu Leu Ala Cys Gly	Thr Met Ser Ser Thr	Cys
	380	385	390
Gly Gln Leu Ala	Ser Tyr Pro Leu Ala	Leu Val Arg Thr Arg	Met
	395	400	405
Gln Ala Gln Ala	Ser Ile Glu Gly Ala	Pro Glu Val Thr Met	Ser
	410	415	420
Ser Leu Phe Lys	His Ile Leu Arg Thr	Glu Gly Ala Phe Gly	Leu
	425	430	435
Tyr Arg Gly Leu	Ala Pro Asn Phe Met	Lys Val Ile Pro Ala	Val
	440	445	450
Ser Ile Ser Tyr	Val Val Tyr Glu Asn	Leu Lys Ile Thr Leu	Gly
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Val Gln Ser Arg

<210> 290

<211> 1658

<212> DNA

<213> Homo sapiens

<400> 290

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<210> 291

<211> 282

<212> PRT

<213> Homo sapiens

<400> 291

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Ile	Ile	Ile	Leu	Ala	Gly	Ala	Ile	Ala	Leu	Ile	Ile	Gly	Phe	Gly		20	25	30
Ile	Ser	Gly	Arg	His	Ser	Ile	Thr	Val	Thr	Thr	Val	Ala	Ser	Ala		35	40	45
Gly	Asn	Ile	Gly	Glu	Asp	Gly	Ile	Leu	Ser	Cys	Thr	Phe	Glu	Pro		50	55	60
Asp	Ile	Lys	Leu	Ser	Asp	Ile	Val	Ile	Gln	Trp	Leu	Lys	Glu	Gly		65	70	75
Val	Leu	Gly	Leu	Val	His	Glu	Phe	Lys	Glu	Gly	Lys	Asp	Glu	Leu		80	85	90
Ser	Glu	Gln	Asp	Glu	Met	Phe	Arg	Gly	Arg	Thr	Ala	Val	Phe	Ala		95	100	105
Asp	Gln	Val	Ile	Val	Gly	Asn	Ala	Ser	Leu	Arg	Leu	Lys	Asn	Val		110	115	120
Gln	Leu	Thr	Asp	Ala	Gly	Thr	Tyr	Lys	Cys	Tyr	Ile	Ile	Thr	Ser		125	130	135
Lys	Gly	Lys	Gly	Asn	Ala	Asn	Leu	Glu	Tyr	Lys	Thr	Gly	Ala	Phe		140	145	150
Ser	Met	Pro	Glu	Val	Asn	Val	Asp	Tyr	Asn	Ala	Ser	Ser	Glu	Thr		155	160	165
Leu	Arg	Cys	Glu	Ala	Pro	Arg	Trp	Phe	Pro	Gln	Pro	Thr	Val	Val		170	175	180
Trp	Ala	Ser	Gln	Val	Asp	Gln	Gly	Ala	Asn	Phe	Ser	Glu	Val	Ser		185	190	195
Asn	Thr	Ser	Phe	Glu	Leu	Asn	Ser	Glu	Asn	Val	Thr	Met	Lys	Val		200	205	210
Val	Ser	Val	Leu	Tyr	Asn	Val	Thr	Ile	Asn	Asn	Thr	Tyr	Ser	Cys		215	220	225
Met	Ile	Glu	Asn	Asp	Ile	Ala	Lys	Ala	Thr	Gly	Asp	Ile	Lys	Val		230	235	240
Thr	Glu	Ser	Glu	Ile	Lys	Arg	Arg	Ser	His	Leu	Gln	Leu	Leu	Asn		245	250	255
Ser	Lys	Ala	Ser	Leu	Cys	Val	Ser	Ser	Phe	Phe	Ala	Ile	Ser	Trp		260	265	270
Ala	Leu	Leu	Pro	Leu	Ser	Pro	Tyr	Leu	Met	Leu	Lys					275	280	

<210> 292

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 292

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293

<211> 180

<212> PRT

<213> Homo sapiens

<400> 293

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			20					25						30
Gly	Leu	Gln	Arg	Val	His	Glu	Pro	Thr	Trp	Ala	Gln	Gln	Leu	Leu
			35					40						45
Gln	Glu	Met	Lys	Thr	Leu	Phe	Leu	Asn	Thr	Glu	Tyr	Leu	Met	Pro
			50					55						60
Phe	Leu	Leu	Asn	Gln	Cys	Gly	Ser	Leu	Leu	Tyr	Tyr	Leu	Thr	Leu
			65					70						75
Ala	Ser	Thr	Asp	Leu	Thr	Leu	Ala	Val	Pro	Ile	Cys	Asn	Ser	Leu
			80					85						90
Ala	Ile	Ile	Phe	Thr	Leu	Ile	Val	Gly	Lys	Ala	Leu	Gly	Glu	Asp
			95					100						105
Ile	Gly	Gly	Lys	Arg	Lys	Leu	Asp	Tyr	Cys	Glu	Cys	Gly	Thr	Gln
			110					115						120
Leu	Cys	Gly	Ser	Arg	His	Thr	Cys	Val	Ser	Ser	Phe	Pro	Glu	Pro
			125					130						135
Ile	Ser	Pro	Glu	Trp	Val	Arg	Thr	Arg	Pro	Phe	Pro	Ile	Leu	Pro
			140					145						150
Phe	Pro	Leu	Gln	Leu	Phe	Cys	Phe	Leu	Val	Ala	Ile	Arg	Val	Pro
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Phe	Pro	Trp	Thr	Val	Trp	Arg	Lys	Thr	Glu	Ala	Gly	Val	Trp	Asp
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<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

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<210> 295  
 <211> 237  
 <212> PRT  
 <213> Homo sapiens

<400> 295  
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 Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn  
 35 40 45  
 Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro  
 50 55 60



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<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

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			20						25					30
Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
			35						40					45
Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
			50						55					60
Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp
			65						70					75
Arg	Leu	Ala	Gly	Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val
			80						85					90

Ser	Thr	Gly	Phe	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly	95	100	105
Ser	Ser	Glu	Glu	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr	110	115	120
Ser	Arg	Glu	Leu	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser	125	130	135
Ser	Thr	Arg	Phe	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu	140	145	150
Thr	Ser	Ser	Leu	Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu	155	160	165
Pro	Gly	Ser	Gln	Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser	170	175	180
Thr	Pro	Ser	Arg	Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser	185	190	195
Pro	Glu	Asp	Leu	Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His	200	205	210
Cys	His	Cys	Lys	Ser	Gly	Thr	Met	Ser	Arg	Ser	Arg	Ser	Gly	Lys	215	220	225
Leu	His	Gly	Leu	Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln	230	235	240
Leu	Arg	Thr	Glu	His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys	245	250	255
Asn	Arg	Leu	Arg	Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr	260	265	270
Asp	Thr	Asn	Cys	Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr	275	280	285
Thr	Thr	Pro	Phe	Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu	290	295	300
Pro	Pro	Ala	Ser	Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val	305	310	315
Arg	Ile	Gly	Leu	Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe	320	325	330
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<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

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Ala Leu Ala Ser Gly Ser Gln Gly Asp Arg Glu Pro Val Tyr Arg

20										25					30				
Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala					
				35					40					45					
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala					
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Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val					
				65					70					75					
Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe					
				80					85					90					
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro					
				95					100					105					
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val					
				110					115					120					
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met					
				125					130					135					
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp					
				140					145					150					
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu					
				155					160					165					
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile					
				170					175					180					
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val					
				185					190					195					
Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His					
				200					205					210					
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu					
				215					220					225					
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu					
				230					235					240					
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys					
				245					250					255					
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu					
				260					265					270					
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala					
				275					280					285					
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser					
				290					295					300					
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp					
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Lys Phe Lys Leu Asp  
320

<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

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<210> 301

<211> 461

<212> PRT

<213> Homo sapiens

<400> 301

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Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr				

	170		175		180
Asp Met Gln Ile	Met Val Arg Leu Ile	Asn Lys Phe Asn Ser Ser			
	185		190		195
Ser Ser Ser Leu	Glu Glu Lys Ile Ala	Ala Leu Phe Asp Leu Glu			
	200		205		210
Tyr Tyr Val His	Gln Met Asp Asn Ala	Gln Asp Leu Leu Ser Phe			
	215		220		225
Gly Gly Leu Gln	Val Val Ile Asn Gly	Leu Asn Ser Thr Glu Pro			
	230		235		240
Leu Val Lys Glu	Tyr Ala Ala Phe Val	Leu Gly Ala Ala Phe Ser			
	245		250		255
Ser Asn Pro Lys	Val Gln Val Glu Ala	Ile Glu Gly Gly Ala Leu			
	260		265		270
Gln Lys Leu Leu	Val Ile Leu Ala Thr	Glu Gln Pro Leu Thr Ala			
	275		280		285
Lys Lys Lys Val	Leu Phe Ala Leu Cys	Ser Leu Leu Arg His Phe			
	290		295		300
Pro Tyr Ala Gln	Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val			
	305		310		315
Leu Arg Thr Leu	Val Gln Glu Lys Gly	Thr Glu Val Leu Ala Val			
	320		325		330
Arg Val Val Thr	Leu Leu Tyr Asp Leu	Val Thr Glu Lys Met Phe			
	335		340		345
Ala Glu Glu Glu	Ala Glu Leu Thr Gln	Glu Met Ser Pro Glu Lys			
	350		355		360
Leu Gln Gln Tyr	Arg Gln Val His Leu	Leu Pro Gly Leu Trp Glu			
	365		370		375
Gln Gly Trp Cys	Glu Ile Thr Ala His	Leu Leu Ala Leu Pro Glu			
	380		385		390
His Asp Ala Arg	Glu Lys Val Leu Gln	Thr Leu Gly Val Leu Leu			
	395		400		405
Thr Thr Cys Arg	Asp Arg Tyr Arg Gln	Asp Pro Gln Leu Gly Arg			
	410		415		420
Thr Leu Ala Ser	Leu Gln Ala Glu Tyr	Gln Val Leu Ala Ser Leu			
	425		430		435
Glu Leu Gln Asp	Gly Glu Asp Glu Gly	Tyr Phe Gln Glu Leu Leu			
	440		445		450
Gly Ser Val Asn	Ser Leu Leu Lys Glu	Leu Arg			
	455		460		

<210> 302  
<211> 2136  
<212> DNA  
<213> Homo sapiens

<400> 302  
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gccatggggg ctgcggtggt ttctggctgc actttcgtcg cgttcggccc 250  
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actcacctcc cttccctct gcaggccgac ggcaggagga cagtcgggtg 1300

atggtgtatt ctgccctgcg catccacccc gaggactgag ggaacctagg 1350  
 ggggaccacct gggcctgggg tgccctcctg atgtcctcgc cctgtatttc 1400  
 tccatctcca gttctggaca gtgcaggttg ccaagaaaag ggacctagtt 1450  
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 ggtggagtgt cccatccttt taatcaagggt gattgtgatt ttgactaata 2050  
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303

<211> 247

<212> PRT

<213> Homo sapiens

<400> 303

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				20					25					30
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser
				35					40					45
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr
				50					55					60
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly
				65					70					75
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr
				80					85					90

Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	
				95					100					105	
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	
				110					115					120	
Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	
				125					130					135	
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	
				140					145					150	
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	
				155					160					165	
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	
				170					175					180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	
				185					190					195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	
				200					205					210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	
				215					220					225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	
				230					235					240	
Arg	Ser	Leu	Leu	Cys	Lys	Asp									
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<210> 304

<211> 240

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 108, 123, 126, 154, 198, 206, 217

<223> unknown base

<400> 304

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cctganttca gccttntga cagcagccat tatectgctc 240

<210> 305

<211> 378

<212> DNA

<213> Homo sapiens

<220>  
 <221> unsure  
 <222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332  
 <223> unknown base

<400> 305  
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 ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150  
 atcaccatt tccatccgcc agatggccta tgttnttggg ntttccttcg 200  
 gtatcatcag tgggtgtttt tctgttatca atattttggn tgatgcantt 250  
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 ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350  
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<210> 306  
 <211> 655  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 1, 22, 129, 133, 184  
 <223> unknown base

<400> 306  
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 gcgttgccac cccacgcgga ctccccagnt gnggcgcct tcccatttgc 150  
 ctgtcctggg caggccccca ccccccttc cacntgacca gccatggggg 200  
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 tattttggct gatgcacttg ggccagggtg ggttgggatc catggagact 650

caccc 655

<210> 307  
 <211> 650  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 52, 89, 128  
 <223> unknown base

<400> 307  
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 cgttgccacc ccacgcggac tccccagntg gcgcgccct cccatttgcc 150  
 tgtcctggtc aggccccac ccccttccc acctgaccag ccatggggc 200  
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 tcgcaggggc atttttctgg ctggtctccc tgctcctggc ctctgtggtc 350  
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 tcgctgagtg aggacggaag atcaccatc tccatccgcc agatggccta 550  
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctc tctgttatca 600  
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<210> 308  
 <211> 1570  
 <212> DNA  
 <213> Homo sapiens

<400> 308  
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 ctggtgaggg tggctcagca ggcagggaag gagaggtgtc tgtgcgtcct 200  
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ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750  
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cactctaacg acctcatgct catcaaatg aacagaagaa ttcgtccac 850  
taaagatgtc agaccatca acgtctctc tcattgtccc tctgctggga 900  
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gcgggggttg cgtctcaate tcctggggc actttcatcc tcaagctcag 1500  
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ctgagaagtg gaaaaaaaaa 1570

<210> 309

<211> 293

<212> PRT

<213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu
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Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn	
				20					25					30	
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Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser	
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Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met	
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Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr	
				95					100					105	
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His	
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Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln	
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Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His	
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Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser	
				185					190					195	
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser	
				200					205					210	
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile	
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Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser	
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Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu	
				245					250					255	
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn	
				260					265					270	
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile	
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<211> 461

<212> PRT

<213> Homo sapiens

<400> 314

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Glu	Asp	Arg	Pro	Arg	Asp	Lys	Pro	Gln	Arg	Pro	Ser	Cys	Gly	Tyr
			20					25					30	

Val	Leu	Cys	Thr	Val	Leu	Leu	Ala	Leu	Ala	Val	Leu	Leu	Ala	Val
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Ala	Val	Thr	Gly	Ala	Val	Leu	Phe	Leu	Asn	His	Ala	His	Ala	Pro	
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Gly	Thr	Ala	Pro	Pro	Pro	Val	Val	Ser	Thr	Gly	Ala	Ala	Ser	Ala	
				65					70					75	
Asn	Ser	Ala	Leu	Val	Thr	Val	Glu	Arg	Ala	Asp	Ser	Ser	His	Leu	
				80					85					90	
Ser	Ile	Leu	Ile	Asp	Pro	Arg	Cys	Pro	Asp	Leu	Thr	Asp	Ser	Phe	
				95					100					105	
Ala	Arg	Leu	Glu	Ser	Ala	Gln	Ala	Ser	Val	Leu	Gln	Ala	Leu	Thr	
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Glu	His	Gln	Ala	Gln	Pro	Arg	Leu	Val	Gly	Asp	Gln	Glu	Gln	Glu	
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Leu	Leu	Asp	Thr	Leu	Ala	Asp	Gln	Leu	Pro	Arg	Leu	Leu	Ala	Arg	
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Ala	Ser	Glu	Leu	Gln	Thr	Glu	Cys	Met	Gly	Leu	Arg	Lys	Gly	His	
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Gly	Thr	Leu	Gly	Gln	Gly	Leu	Ser	Ala	Leu	Gln	Ser	Glu	Gln	Gly	
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Arg	Leu	Ile	Gln	Leu	Leu	Ser	Glu	Ser	Gln	Gly	His	Met	Ala	His	
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Leu	Val	Asn	Ser	Val	Ser	Asp	Ile	Leu	Asp	Ala	Leu	Gln	Arg	Asp	
				200					205					210	
Arg	Gly	Leu	Gly	Arg	Pro	Arg	Asn	Lys	Ala	Asp	Leu	Gln	Arg	Ala	
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Pro	Ala	Arg	Gly	Thr	Arg	Pro	Arg	Gly	Cys	Ala	Thr	Gly	Ser	Arg	
				230					235					240	
Pro	Arg	Asp	Cys	Leu	Asp	Val	Leu	Leu	Ser	Gly	Gln	Gln	Asp	Asp	
				245					250					255	
Gly	Val	Tyr	Ser	Val	Phe	Pro	Thr	His	Tyr	Pro	Ala	Gly	Phe	Gln	
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Val	Tyr	Cys	Asp	Met	Arg	Thr	Asp	Gly	Gly	Gly	Trp	Thr	Val	Phe	
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Gln	Arg	Arg	Glu	Asp	Gly	Ser	Val	Asn	Phe	Phe	Arg	Gly	Trp	Asp	
				290					295					300	
Ala	Tyr	Arg	Asp	Gly	Phe	Gly	Arg	Leu	Thr	Gly	Glu	His	Trp	Leu	
				305					310					315	
Gly	Leu	Lys	Arg	Ile	His	Ala	Leu	Thr	Thr	Gln	Ala	Ala	Tyr	Glu	
				320					325					330	
Leu	His	Val	Asp	Leu	Glu	Asp	Phe	Glu	Asn	Gly	Thr	Ala	Tyr	Ala	

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Arg Tyr Gly Ser	Phe Gly Val Gly Leu	Phe Ser Val Asp Pro	Glu		
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Glu Asp Gly Tyr	Pro Leu Thr Val Ala	Asp Tyr Ser Gly Thr	Ala		
	365	370	375		
Gly Asp Ser Leu	Leu Lys His Ser Gly	Met Arg Phe Thr Thr	Lys		
	380	385	390		
Asp Arg Asp Ser	Asp His Ser Glu Asn	Asn Cys Ala Ala Phe	Tyr		
	395	400	405		
Arg Gly Ala Trp	Trp Tyr Arg Asn Cys	His Thr Ser Asn Leu	Asn		
	410	415	420		
Gly Gln Tyr Leu	Arg Gly Ala His Ala	Ser Tyr Ala Asp Gly	Val		
	425	430	435		
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<220>  
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<210> 317  
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<211> 280

<212> PRT

<213> Homo sapiens

<400> 319

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Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
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Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
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Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150

Phe Tyr Lys Asp Ser Lys Ser Trp Glu Asp Cys Lys Tyr Phe Cys	155	160	165
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Tyr Trp Thr Gly Leu Leu Arg Pro Asp Ser Gly Lys Ala Trp Leu	200	205	210
Trp Met Asp Gly Thr Pro Phe Thr Ser Glu Leu Phe His Ile Ile	215	220	225
Ile Asp Val Thr Ser Pro Arg Ser Arg Asp Cys Val Ala Ile Leu	230	235	240
Asn Gly Met Ile Phe Ser Lys Asp Cys Lys Glu Leu Lys Arg Cys	245	250	255
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<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 59, 95, 149, 331, 364, 438, 446

<223> unknown base

<400> 320

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 cgagctgaac tggaacgcac gtaccaggag atccaggagt tacagtggga 1300  
 gatccagaat accagccatc tggccgttga tggggaccgg gcagctgctt 1350  
 ggcccgctggg tattccagca ccatccgcc cggcctcccg ctttgagggtg 1400  
 ctgcgctggg actacttcac ggagcagcac gctttctcct gcgccgatgg 1450  
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 cggtccaga agcagcagct ggtgaatggc taccgacgct ttgatccggc 1600  
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<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met	Arg	Ala	Ser	Leu	Leu	Leu	Ser	Val	Leu	Arg	Pro	Ala	Gly	Pro	1	5	10	15
Val	Ala	Val	Gly	Ile	Ser	Leu	Gly	Phe	Thr	Leu	Ser	Leu	Leu	Ser	20	25	30	
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro	35	40	45	
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg	50	55	60	
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly	65	70	75	
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro	80	85	90	
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg	95	100	105	
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu	110	115	120	
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val	125	130	135	
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe	140	145	150	
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val	155	160	165	
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala	170	175	180	
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe	185	190	195	
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala	200	205	210	
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr	215	220	225	
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly	230	235	240	
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu	245	250	255	
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile	260	265	270	
Val	Ser	Ala	Arg	Pro	Asp	Glu	Trp	Leu	Gly	Arg	Cys	Ile	Leu	Asp	275	280	285	

Ala Thr Gly Val	Gly Cys Thr Gly Asp	His Glu Gly Val His Tyr
290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu	Pro Val Gln Glu Gly Asp
305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala	His Pro Val Arg Asp Pro
320	325	330
Val His Met Tyr	Gln Leu His Lys Ala	Phe Ala Arg Ala Glu Leu
335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu	Leu Gln Trp Glu Ile Gln
350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly	Asp Arg Ala Ala Ala Trp
365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg	Pro Ala Ser Arg Phe Glu
380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu	Gln His Ala Phe Ser Cys
395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu	Arg Gly Ala Asp Arg Ala
410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala	Leu Glu Glu Leu Asn Arg
425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln	Lys Gln Gln Leu Val Asn
440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg	Gly Met Glu Tyr Thr Leu
455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro	Gln Gly Gly Arg Arg Pro
470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg	Pro Leu Ser Arg Val Glu
485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu	Ala Ser Arg Leu Thr Val
500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg	Asp Leu Ala Pro Gly Phe
515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu	Glu Pro Gly Asp Ala Ala
530	535	540
Ala Ala Leu Thr	Leu Leu Leu Leu Tyr	Glu Pro Arg Gln Ala Gln
545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala	Pro Val Lys Ala His Val
560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly	Ala Arg Val Pro Trp Leu

	575		580		585
Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp Leu			
	590		595		600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala Gly			
	605		610		615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg Met			
	620		625		630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe Gln			
	635		640		645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro Pro			
	650		655		660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala Ser			
	665		670		675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly Arg			
	680		685		690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser Leu			
	695		700		705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val Leu			
	710		715		720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln Thr			
	725		730		735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu Gln			
	740		745		750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met Leu			
	755		760		765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser	Thr			
	770		775		

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>



<223> Synthetic oligonucleotide probe

<400> 328  
ctgatgtggc cgatgttctg 20

<210> 329  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 329  
atggctcagt gtgcagacag 20

<210> 330  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 330  
gcatgctgct ccgtgaagtc gtcc 24

<210> 331  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 331  
atgcatggga aagaaggcct gccc 24

<210> 332  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 332  
tgcactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333  
<211> 1095  
<212> DNA  
<213> Homo sapiens

<400> 333  
gctctggccg gccccggcga ttggtcaccg cccgctaggg gacagccctg 50  
gcctcctctg attggcaagc gctggccacc tccccacacc ccttgcaac 100

gctcccctag tggagaaaag gagtagctat tagccaattc ggcagggccc 150  
gctttttaga agcttgattt cctttgaaga tgaaagacta gcggaagctc 200  
tgcctctttc ccagtgggc gagggaaactc ggggcgattg gctgggaact 250  
gtatccaccc aaatgtcacc gatttcttcc tatgcaggaa atgagcagac 300  
ccatcaataa gaaatttctc agcctggccg aaaatgggtg gccccacgaa 350  
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400  
aaaaccaaat cagatctggg acctatatag cgtggcggag gcggggcgat 450  
gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500  
ccgcccctga gaccctgcag caccatctgt catggcggct gggctgtttg 550  
gtttgagcgc tcgccgtctt ttggcggcag cggcgacgcg agggctcccg 600  
gccgcccgcg tccgctggga atctagcttc tccaggactg tggtcgcccc 650  
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ctgcttcgac ccagcaaga tccagctgcc agaggatgag tgaccagttg 1000  
ctaagtgggg ctcaagaagc accgccttcc ccacccctg cctgccattc 1050  
tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

Met	Ala	Ala	Gly	Leu	Phe	Gly	Leu	Ser	Ala	Arg	Arg	Leu	Leu	Ala
1				5					10					15
Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu
			20					25						30
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
			35					40						45
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
			50					55						60

Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly	65	70	75
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val	80	85	90
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe	95	100	105
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg	110	115	120
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro	125	130	135
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro	140	145	150

Glu Asp Glu

<210> 335  
 <211> 442  
 <212> DNA  
 <213> Homo sapiens

<400> 335  
 ggcggctggg ctgtttgggt tgagcgctcg ccgtcttttg gcggcagcgg 50  
 cgacgcgagg gctccccggc gcccgcgctc gctgggaatc tagcttctcc 100  
 aggactgtgg tcgccccgtc cgctgtggcg ggaaagcggc cccagaacc 150  
 gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgatg 200  
 agaagaaccc agactcccat ggttatgaca aggaccccg tttggacgtc 250  
 tggaacatgc gacttgctt cttctttggc gtctccatca tcctggctc 300  
 tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350  
 ccgcgcgca agctgagagg cttgtgaaat accgagaggc caatggcctt 400  
 cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 336  
 ctgagaccct gcagcaccat ctg 23

<210> 337  
 <211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 337  
ggtgcttctt gagccccact tagc 24

<210> 338  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 338  
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339  
<211> 2162  
<212> DNA  
<213> Homo sapiens

<400> 339  
gcggcggcta tgccgcttgc tctgctcgtc ctggtgctcc tggggcccgg 50  
cggctggtgc cttgcagaac cccacgcga cagcctgcgg gaggaacttg 100  
tcatcacccc gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150  
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggct 200  
ctttcccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250  
tgcacctgtc attcacacaa ggcttttgga ggacccgata ctgggggcca 300  
cccttcctgc agggcccatc aggtgcagag ctgtgggtct ggttccaaga 350  
cactgtcact gatgtggata aatcttgga ggagctcagt aatgtcctct 400  
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450  
actcccactg cctccttcaa acccctgggt ctggccaatg aactgacca 500  
ctactttctg cgctatgctg tgctgccgcg ggaggtggtc tgcaccgaaa 550  
acctcacccc ctggaagaag ctcttgccct gtagttccaa ggcaggcctc 600  
tctgtgctgc tgaaggcaga tcgcttggtc cacaccagct accactccca 650  
ggcagtgc atccgccctg tttgcagaaa tgcacgctgt actagcatct 700  
cctgggagct gaggcagacc ctgtcagttg tatttgatgc cttcatcacg 750  
gggcagggaa agaaagactg gtccctcttc cggatgttct cccgaaccct 800

cacggagccc tgccccctgg cttcagagag ccgagtctat gtggacatca 850  
ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900  
actacatata aggacgtcat cctaggcact cggaagacct atgccatcta 950  
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tgctggacac cgtaccctgg tatctgcggc tgtatgtgca caccctcacc 1200  
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tctaactact ttgtgcggct ctacacggag ccgctgctgg tgaacctgcc 1550  
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aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900  
gtggcatttg aatttgaatt aacttagaaa ttcatttctt cacctgtagt 1950  
ggccacctct atattgaggt gctcaataag caaaagtggc cggtggctgc 2000  
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050  
ggcagcactg gccaaaggta tgggggtgtgc tacacagtgt atgtcactgt 2100  
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150  
aaaaaaaaaa aa 2162

<210> 340

<211> 574

<212> PRT

<213> Homo sapiens

<400> 340

Met	Pro	Leu	Ala	Leu	Leu	Val	Leu	Leu	Leu	Leu	Gly	Pro	Gly	Gly	
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Trp	Cys	Leu	Ala	Glu	Pro	Pro	Arg	Asp	Ser	Leu	Arg	Glu	Glu	Leu	
				20					25					30	
Val	Ile	Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	Gln	
				35					40					45	
Phe	Arg	Thr	Arg	Trp	Asp	Ser	Glu	Leu	Gln	Arg	Glu	Gly	Val	Ser	
				50					55					60	
His	Tyr	Arg	Leu	Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	Lys	
				65					70					75	
Tyr	Ser	Leu	Arg	Glu	Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	Trp	
				80					85					90	
Arg	Thr	Arg	Tyr	Trp	Gly	Pro	Pro	Phe	Leu	Gln	Ala	Pro	Ser	Gly	
				95					100					105	
Ala	Glu	Leu	Trp	Val	Trp	Phe	Gln	Asp	Thr	Val	Thr	Asp	Val	Asp	
				110					115					120	
Lys	Ser	Trp	Lys	Glu	Leu	Ser	Asn	Val	Leu	Ser	Gly	Ile	Phe	Cys	
				125					130					135	
Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr	Asn	Thr	Val	Thr	Pro	Thr	
				140					145					150	
Ala	Ser	Phe	Lys	Pro	Leu	Gly	Leu	Ala	Asn	Asp	Thr	Asp	His	Tyr	
				155					160					165	
Phe	Leu	Arg	Tyr	Ala	Val	Leu	Pro	Arg	Glu	Val	Val	Cys	Thr	Glu	
				170					175					180	
Asn	Leu	Thr	Pro	Trp	Lys	Lys	Leu	Leu	Pro	Cys	Ser	Ser	Lys	Ala	
				185					190					195	
Gly	Leu	Ser	Val	Leu	Leu	Lys	Ala	Asp	Arg	Leu	Phe	His	Thr	Ser	
				200					205					210	
Tyr	His	Ser	Gln	Ala	Val	His	Ile	Arg	Pro	Val	Cys	Arg	Asn	Ala	
				215					220					225	
Arg	Cys	Thr	Ser	Ile	Ser	Trp	Glu	Leu	Arg	Gln	Thr	Leu	Ser	Val	
				230					235					240	
Val	Phe	Asp	Ala	Phe	Ile	Thr	Gly	Gln	Gly	Lys	Lys	Asp	Trp	Ser	
				245					250					255	
Leu	Phe	Arg	Met	Phe	Ser	Arg	Thr	Leu	Thr	Glu	Pro	Cys	Pro	Leu	
				260					265					270	

Ala Ser Glu Ser Arg Val Tyr Val Asp Ile Thr Thr Tyr Asn Gln	275	280	285
Asp Asn Glu Thr Leu Glu Val His Pro Pro Pro Thr Thr Thr Tyr	290	295	300
Gln Asp Val Ile Leu Gly Thr Arg Lys Thr Tyr Ala Ile Tyr Asp	305	310	315
Leu Leu Asp Thr Ala Met Ile Asn Asn Ser Arg Asn Leu Asn Ile	320	325	330
Gln Leu Lys Trp Lys Arg Pro Pro Glu Asn Glu Ala Pro Pro Val	335	340	345
Pro Phe Leu His Ala Gln Arg Tyr Val Ser Gly Tyr Gly Leu Gln	350	355	360
Lys Gly Glu Leu Ser Thr Leu Leu Tyr Asn Thr His Pro Tyr Arg	365	370	375
Ala Phe Pro Val Leu Leu Leu Asp Thr Val Pro Trp Tyr Leu Arg	380	385	390
Leu Tyr Val His Thr Leu Thr Ile Thr Ser Lys Gly Lys Glu Asn	395	400	405
Lys Pro Ser Tyr Ile His Tyr Gln Pro Ala Gln Asp Arg Leu Gln	410	415	420
Pro His Leu Leu Glu Met Leu Ile Gln Leu Pro Ala Asn Ser Val	425	430	435
Thr Lys Val Ser Ile Gln Phe Glu Arg Ala Leu Leu Lys Trp Thr	440	445	450
Glu Tyr Thr Pro Asp Pro Asn His Gly Phe Tyr Val Ser Pro Ser	455	460	465
Val Leu Ser Ala Leu Val Pro Ser Met Val Ala Ala Lys Pro Val	470	475	480
Asp Trp Glu Glu Ser Pro Leu Phe Asn Ser Leu Phe Pro Val Ser	485	490	495
Asp Gly Ser Asn Tyr Phe Val Arg Leu Tyr Thr Glu Pro Leu Leu	500	505	510
Val Asn Leu Pro Thr Pro Asp Phe Ser Met Pro Tyr Asn Val Ile	515	520	525
Cys Leu Thr Cys Thr Val Val Ala Val Cys Tyr Gly Ser Phe Tyr	530	535	540
Asn Leu Leu Thr Arg Thr Phe His Ile Glu Glu Pro Arg Thr Gly	545	550	555
Gly Leu Ala Lys Arg Leu Ala Asn Leu Ile Arg Arg Ala Arg Gly			

Val Pro Pro Leu

<210> 341  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 341  
 tggacaccgt accctggtat ctgc 24

<210> 342  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic oligonucleotide probe

<400> 342  
 ccaactctga ggagagcaag tggc 24

<210> 343  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 343  
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<210> 344  
 <211> 762  
 <212> DNA  
 <213> Homo sapiens

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 gtttgccag ctgacaacgt acgctgcttc aagtcgatc ctccccagtg 150  
 tcacacagac caggactgtc tgggggaaag gaagtgttgt tacctgcaact 200  
 gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250  
 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300



gtgtccaggc tctctctcta ccagggtgcc tcagaaatga tgctgggtcc 350  
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 gagacttggg atatggaaga agcaataccc aacccaccca aagaaaacct 450  
 gagcttgaag tccttttccc caaaaagagg gaagagtcac aaaaagtcca 500  
 gacccagggg acggtacttt ccctctctac ctggtgctcc tccctaattgc 550  
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600  
 aaagagctgc cttgcccttc tgcaatgtgt gatcacagct agaaggcact 650  
 gtcagagaag agaaactggg cctcaccaga tgetgaatct gctggtgcct 700  
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 ttataatcc aa 762

<210> 345  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 345  
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 Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys  
 20 25 30  
 Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp  
 35 40 45  
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys  
 50 55 60  
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys  
 65 70 75  
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro  
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 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser  
 95 100 105  
 Thr Arg Cys Pro Gln Lys  
 110

<210> 346  
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 <212> DNA  
 <213> Homo sapiens

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 gtctgcctg tggagatgca ggcacctgag ccaaggcgtc cagtggctct 200  
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 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400  
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 aacactttgc accaccctt ggcttcattg agctcaacta ctcttggtg 1150  
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 cagactacg tgttccgatt gagcggagct ctcatataag gctacgaaca 1350  
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 ctgtaggtcc tgaggccagg gatttttaat taaatggggg gatgggtggc 2200  
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 ggtctatact tgtccttgtc tttaagctat ttgacaactc tacgtgttgt 2450  
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<210> 347

<211> 600

<212> PRT

<213> Homo sapiens

<400> 347

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Leu	Pro	Ser	Phe	Ile	Lys	Glu	Pro	Gln	Thr	Lys	Pro	Ser	Arg	His
				35					40					45

Gln	Arg	Thr	Glu	Asn	Ile	Lys	Glu	Arg	Ser	Leu	Gln	Ser	Leu	Ala
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

50										55				60			
Lys	Pro	Lys	Ser	Gln	Ala	Pro	Thr	Arg	Ala	Arg	Arg	Thr	Thr	Ile			
				65					70					75			
Tyr	Ala	Glu	Pro	Ala	Pro	Glu	Asn	Asn	Ala	Leu	Asn	Thr	Gln	Thr			
				80					85					90			
Gln	Pro	Lys	Ala	His	Thr	Thr	Gly	Asp	Arg	Gly	Lys	Glu	Ala	Asn			
				95					100					105			
Gln	Ala	Pro	Pro	Glu	Glu	Gln	Asp	Lys	Val	Pro	His	Thr	Ala	Gln			
				110					115					120			
Arg	Ala	Ala	Trp	Lys	Ser	Pro	Glu	Lys	Glu	Lys	Thr	Met	Val	Asn			
				125					130					135			
Thr	Leu	Ser	Pro	Arg	Gly	Gln	Asp	Ala	Gly	Met	Ala	Ser	Gly	Arg			
				140					145					150			
Thr	Glu	Ala	Gln	Ser	Trp	Lys	Ser	Gln	Asp	Thr	Lys	Thr	Thr	Gln			
				155					160					165			
Gly	Asn	Gly	Gly	Gln	Thr	Arg	Lys	Leu	Thr	Ala	Ser	Arg	Thr	Val			
				170					175					180			
Ser	Glu	Lys	His	Gln	Gly	Lys	Ala	Ala	Thr	Thr	Ala	Lys	Thr	Leu			
				185					190					195			
Ile	Pro	Lys	Ser	Gln	His	Arg	Met	Leu	Ala	Pro	Thr	Gly	Ala	Val			
				200					205					210			
Ser	Thr	Arg	Thr	Arg	Gln	Lys	Gly	Val	Thr	Thr	Ala	Val	Ile	Pro			
				215					220					225			
Pro	Lys	Glu	Lys	Lys	Pro	Gln	Ala	Thr	Pro	Pro	Pro	Ala	Pro	Phe			
				230					235					240			
Gln	Ser	Pro	Thr	Thr	Gln	Arg	Asn	Gln	Arg	Leu	Lys	Ala	Ala	Asn			
				245					250					255			
Phe	Lys	Ser	Glu	Pro	Arg	Trp	Asp	Phe	Glu	Glu	Lys	Tyr	Ser	Phe			
				260					265					270			
Glu	Ile	Gly	Gly	Leu	Gln	Thr	Thr	Cys	Pro	Asp	Ser	Val	Lys	Ile			
				275					280					285			
Lys	Ala	Ser	Lys	Ser	Leu	Trp	Leu	Gln	Lys	Leu	Phe	Leu	Pro	Asn			
				290					295					300			
Leu	Thr	Leu	Phe	Leu	Asp	Ser	Arg	His	Phe	Asn	Gln	Ser	Glu	Trp			
				305					310					315			
Asp	Arg	Leu	Glu	His	Phe	Ala	Pro	Pro	Phe	Gly	Phe	Met	Glu	Leu			
				320					325					330			
Asn	Tyr	Ser	Leu	Val	Gln	Lys	Val	Val	Thr	Arg	Phe	Pro	Pro	Val			
				335					340					345			

Pro	Gln	Gln	Gln	Leu	Leu	Leu	Ala	Ser	Leu	Pro	Ala	Gly	Ser	Leu	350	355	360
Arg	Cys	Ile	Thr	Cys	Ala	Val	Val	Gly	Asn	Gly	Gly	Ile	Leu	Asn	365	370	375
Asn	Ser	His	Met	Gly	Gln	Glu	Ile	Asp	Ser	His	Asp	Tyr	Val	Phe	380	385	390
Arg	Leu	Ser	Gly	Ala	Leu	Ile	Lys	Gly	Tyr	Glu	Gln	Asp	Val	Gly	395	400	405
Thr	Arg	Thr	Ser	Phe	Tyr	Gly	Phe	Thr	Ala	Phe	Ser	Leu	Thr	Gln	410	415	420
Ser	Leu	Leu	Ile	Leu	Gly	Asn	Arg	Gly	Phe	Lys	Asn	Val	Pro	Leu	425	430	435
Gly	Lys	Asp	Val	Arg	Tyr	Leu	His	Phe	Leu	Glu	Gly	Thr	Arg	Asp	440	445	450
Tyr	Glu	Trp	Leu	Glu	Ala	Leu	Leu	Met	Asn	Gln	Thr	Val	Met	Ser	455	460	465
Lys	Asn	Leu	Phe	Trp	Phe	Arg	His	Arg	Pro	Gln	Glu	Ala	Phe	Arg	47	475	480
Glu	Ala	Leu	His	Met	Asp	Arg	Tyr	Leu	Leu	Leu	His	Pro	Asp	Phe	485	490	495
Leu	Arg	Tyr	Met	Lys	Asn	Arg	Phe	Leu	Arg	Ser	Lys	Thr	Leu	Asp	500	505	510
Gly	Ala	His	Trp	Arg	Ile	Tyr	Arg	Pro	Thr	Thr	Gly	Ala	Leu	Leu	515	520	525
Leu	Leu	Thr	Ala	Leu	Gln	Leu	Cys	Asp	Gln	Val	Ser	Ala	Tyr	Gly	530	535	540
Phe	Ile	Thr	Glu	Gly	His	Glu	Arg	Phe	Ser	Asp	His	Tyr	Tyr	Asp	545	550	555
Thr	Ser	Trp	Lys	Arg	Leu	Ile	Phe	Tyr	Ile	Asn	His	Asp	Phe	Lys	560	565	570
Leu	Glu	Arg	Glu	Val	Trp	Lys	Arg	Leu	His	Asp	Glu	Gly	Ile	Ile	575	580	585
Arg	Leu	Tyr	Gln	Arg	Pro	Gly	Pro	Gly	Thr	Ala	Lys	Ala	Lys	Asn	590	595	600

<210> 348

<211> 496

<212> DNA

<213> Homo sapiens

<400> 348

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 agtgcagcaa acacttccat agactttatc acaacaccag agactgcacc 200  
 attcctgcat actataaaag atgcgccagg cttcttacct ggctggctgt 250  
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 accaggagcc atgagaagtg ccttggaac caacagggaa acagaactat 350  
 ctttatacac atccccctcat ggacaagaga tttatttttg cagacagact 400  
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<210> 349

<211> 91

<212> PRT

<213> Homo sapiens

<400> 349

Met	Arg	Gly	Pro	Gly	His	Pro	Leu	Leu	Leu	Gly	Leu	Leu	Leu	Val
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Leu	Gly	Pro	Ser	Pro	Glu	Gln	Arg	Val	Glu	Ile	Val	Pro	Arg	Asp
				20					25					30
Leu	Arg	Met	Lys	Asp	Lys	Phe	Leu	Lys	His	Leu	Thr	Gly	Pro	Leu
				35					40					45
Tyr	Phe	Ser	Pro	Lys	Cys	Ser	Lys	His	Phe	His	Arg	Leu	Tyr	His
				50					55					60
Asn	Thr	Arg	Asp	Cys	Thr	Ile	Pro	Ala	Tyr	Tyr	Lys	Arg	Cys	Ala
				65					70					75
Arg	Leu	Leu	Thr	Arg	Leu	Ala	Val	Ser	Pro	Val	Cys	Met	Glu	Asp
				80					85					90

Lys

<210> 350

<211> 1141

<212> DNA

<213> Homo sapiens

<400> 350

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<210> 351

<211> 197

<212> PRT

<213> Homo sapiens

<400> 351

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Ala	Leu	Leu	Val	Leu	Gly	Ala	Pro	Leu	Val	Leu	Ala	Gly	Glu	Asp
			20					25						30
Cys	Leu	Trp	Tyr	Leu	Asp	Arg	Asn	Gly	Ser	Trp	His	Pro	Gly	Phe
			35					40						45
Asn	Cys	Glu	Phe	Phe	Thr	Phe	Cys	Cys	Gly	Thr	Cys	Tyr	His	Arg
			50					55						60
Tyr	Cys	Cys	Arg	Asp	Leu	Thr	Leu	Leu	Ile	Thr	Glu	Arg	Gln	Gln
			65					70						75

Lys	His	Cys	Leu	Ala	Phe	Ser	Pro	Lys	Thr	Ile	Ala	Gly	Ile	Ala
				80					85					90
Ser	Ala	Val	Ile	Leu	Phe	Val	Ala	Val	Val	Ala	Thr	Thr	Ile	Cys
				95					100					105
Cys	Phe	Leu	Cys	Ser	Cys	Cys	Tyr	Leu	Tyr	Arg	Arg	Arg	Gln	Gln
				110					115					120
Leu	Gln	Ser	Pro	Phe	Glu	Gly	Gln	Glu	Ile	Pro	Met	Thr	Gly	Ile
				125					130					135
Pro	Val	Gln	Pro	Val	Tyr	Pro	Tyr	Pro	Gln	Asp	Pro	Lys	Ala	Gly
				140					145					150
Pro	Ala	Pro	Pro	Gln	Pro	Gly	Phe	Met	Tyr	Pro	Pro	Ser	Gly	Pro
				155					160					165
Ala	Pro	Gln	Tyr	Pro	Leu	Tyr	Pro	Ala	Gly	Pro	Pro	Val	Tyr	Asn
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Pro	Ala	Ala	Pro	Pro	Pro	Tyr	Met	Pro	Pro	Gln	Pro	Ser	Tyr	Pro
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Gly Ala

<210> 352  
 <211> 3226  
 <212> DNA  
 <213> Homo sapiens

<400> 352  
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 tctcttaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200  
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 ccacatggta atgggtacaa caaatcaatt ctccacaaga acacggcttg 2750  
 aagaggtaaa aggattcttc agctctttga aagaaaatgg ttctcagctc 2800  
 cgttgtgtcc aacagacaat tgaaaccatt gaagaaaaca tcggttgat 2850  
 ggataagaat tttgataaaa tcagagtgtg gctgcaaagt gaaaagcttg 2900  
 aacgtatgta aaaattcctc ccttgcccg gttcctgttat ctctaatac 2950  
 caacattttg ttgagtgtat tttcaacta gagatggctg ttttggctcc 3000  
 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050  
 aaagaatagc tgtagtggg tcatgaatgg gctttttcat gaatgggcta 3100  
 tcgctaccat gtgttttgg catcacagg gttgcctgc aacgtaaacc 3150  
 caagtgttg gttccctgcc acagaagaat aaagtacctt attcttctca 3200  
 aaaaaaaaaa aaaaaaaaaa aaaaaa 3226

<210> 353

<211> 941

<212> PRT

<213> Homo sapiens

<400> 353

Met	Val	Phe	Leu	Pro	Leu	Lys	Trp	Ser	Leu	Ala	Thr	Met	Ser	Phe
1				5					10					15

Leu	Leu	Ser	Ser	Leu	Leu	Ala	Leu	Leu	Thr	Val	Ser	Thr	Pro	Ser
				20					25					30

Trp	Cys	Gln	Ser	Thr	Glu	Ala	Ser	Pro	Lys	Arg	Ser	Asp	Gly	Thr		35	40	45
Pro	Phe	Pro	Trp	Asn	Lys	Ile	Arg	Leu	Pro	Glu	Tyr	Val	Ile	Pro		50	55	60
Val	His	Tyr	Asp	Leu	Leu	Ile	His	Ala	Asn	Leu	Thr	Thr	Leu	Thr		65	70	75
Phe	Trp	Gly	Thr	Thr	Lys	Val	Glu	Ile	Thr	Ala	Ser	Gln	Pro	Thr		80	85	90
Ser	Thr	Ile	Ile	Leu	His	Ser	His	His	Leu	Gln	Ile	Ser	Arg	Ala		95	100	105
Thr	Leu	Arg	Lys	Gly	Ala	Gly	Glu	Arg	Leu	Ser	Glu	Glu	Pro	Leu		110	115	120
Gln	Val	Leu	Glu	His	Pro	Pro	Gln	Glu	Gln	Ile	Ala	Leu	Leu	Ala		125	130	135
Pro	Glu	Pro	Leu	Leu	Val	Gly	Leu	Pro	Tyr	Thr	Val	Val	Ile	His		140	145	150
Tyr	Ala	Gly	Asn	Leu	Ser	Glu	Thr	Phe	His	Gly	Phe	Tyr	Lys	Ser		155	160	165
Thr	Tyr	Arg	Thr	Lys	Glu	Gly	Glu	Leu	Arg	Ile	Leu	Ala	Ser	Thr		170	175	180
Gln	Phe	Glu	Pro	Thr	Ala	Ala	Arg	Met	Ala	Phe	Pro	Cys	Phe	Asp		185	190	195
Glu	Pro	Ala	Phe	Lys	Ala	Ser	Phe	Ser	Ile	Lys	Ile	Arg	Arg	Glu		200	205	210
Pro	Arg	His	Leu	Ala	Ile	Ser	Asn	Met	Pro	Leu	Val	Lys	Ser	Val		215	220	225
Thr	Val	Ala	Glu	Gly	Leu	Ile	Glu	Asp	His	Phe	Asp	Val	Thr	Val		230	235	240
Lys	Met	Ser	Thr	Tyr	Leu	Val	Ala	Phe	Ile	Ile	Ser	Asp	Phe	Glu		245	250	255
Ser	Val	Ser	Lys	Ile	Thr	Lys	Ser	Gly	Val	Lys	Val	Ser	Val	Tyr		260	265	270
Ala	Val	Pro	Asp	Lys	Ile	Asn	Gln	Ala	Asp	Tyr	Ala	Leu	Asp	Ala		275	280	285
Ala	Val	Thr	Leu	Leu	Glu	Phe	Tyr	Glu	Asp	Tyr	Phe	Ser	Ile	Pro		290	295	300
Tyr	Pro	Leu	Pro	Lys	Gln	Asp	Leu	Ala	Ala	Ile	Pro	Asp	Phe	Gln		305	310	315
Ser	Gly	Ala	Met	Glu	Asn	Trp	Gly	Leu	Thr	Thr	Tyr	Arg	Glu	Ser				

	320		325		330
Ala Leu Leu Phe	Asp 335	Ala Glu Lys Ser	Ser 340	Ala Ser Ser Lys	Leu 345
Gly Ile Thr Val	Thr 350	Val Ala His Glu	Leu 355	Ala His Gln Trp	Phe 360
Gly Asn Leu Val	Thr 365	Met Glu Trp Trp	Asn 370	Asp Leu Trp Leu	Asn 375
Glu Gly Phe Ala	Lys 380	Phe Met Glu Phe	Val 385	Ser Val Ser Val	Thr 390
His Pro Glu Leu	Lys 395	Val Gly Asp Tyr	Phe 400	Phe Gly Lys Cys	Phe 405
Asp Ala Met Glu	Val 410	Asp Ala Leu Asn	Ser 415	Ser His Pro Val	Ser 420
Thr Pro Val Glu	Asn 425	Pro Ala Gln Ile	Arg 430	Glu Met Phe Asp	Asp 435
Val Ser Tyr Asp	Lys 440	Gly Ala Cys Ile	Leu 445	Asn Met Leu Arg	Glu 450
Tyr Leu Ser Ala	Asp 455	Ala Phe Lys Ser	Gly 460	Ile Val Gln Tyr	Leu 465
Gln Lys His Ser	Tyr 470	Lys Asn Thr Lys	Asn 475	Glu Asp Leu Trp	Asp 480
Ser Met Ala Ser	Ile 485	Cys Pro Thr Asp	Gly 490	Val Lys Gly Met	Asp 495
Gly Phe Cys Ser	Arg 500	Ser Gln His Ser	Ser 505	Ser Ser Ser His	Trp 510
His Gln Glu Gly	Val 515	Asp Val Lys Thr	Met 520	Met Asn Thr Trp	Thr 525
Leu Gln Arg Gly	Phe 530	Pro Leu Ile Thr	Ile 535	Thr Val Arg Gly	Arg 540
Asn Val His Met	Lys 545	Gln Glu His Tyr	Met 550	Lys Gly Ser Asp	Gly 555
Ala Pro Asp Thr	Gly 560	Tyr Leu Trp His	Val 565	Pro Leu Thr Phe	Ile 570
Thr Ser Lys Ser	Asn 575	Met Val His Arg	Phe 580	Leu Leu Lys Thr	Lys 585
Thr Asp Val Leu	Ile 590	Leu Pro Glu Glu	Val 595	Glu Trp Ile Lys	Phe 600
Asn Val Gly Met	Asn 605	Gly Tyr Tyr Ile	Val 610	His Tyr Glu Asp	Asp 615

Gly	Trp	Asp	Ser	Leu	Thr	Gly	Leu	Leu	Lys	Gly	Thr	His	Thr	Ala
				620					625					630
Val	Ser	Ser	Asn	Asp	Arg	Ala	Ser	Leu	Ile	Asn	Asn	Ala	Phe	Gln
				635					640					645
Leu	Val	Ser	Ile	Gly	Lys	Leu	Ser	Ile	Glu	Lys	Ala	Leu	Asp	Leu
				650					655					660
Ser	Leu	Tyr	Leu	Lys	His	Glu	Thr	Glu	Ile	Met	Pro	Val	Phe	Gln
				665					670					675
Gly	Leu	Asn	Glu	Leu	Ile	Pro	Met	Tyr	Lys	Leu	Met	Glu	Lys	Arg
				680					685					690
Asp	Met	Asn	Glu	Val	Glu	Thr	Gln	Phe	Lys	Ala	Phe	Leu	Ile	Arg
				695					700					705
Leu	Leu	Arg	Asp	Leu	Ile	Asp	Lys	Gln	Thr	Trp	Thr	Asp	Glu	Gly
				710					715					720
Ser	Val	Ser	Glu	Gln	Met	Leu	Arg	Ser	Glu	Leu	Leu	Leu	Leu	Ala
				725					730					735
Cys	Val	His	Asn	Tyr	Gln	Pro	Cys	Val	Gln	Arg	Ala	Glu	Gly	Tyr
				740					745					750
Phe	Arg	Lys	Trp	Lys	Glu	Ser	Asn	Gly	Asn	Leu	Ser	Leu	Pro	Val
				755					760					765
Asp	Val	Thr	Leu	Ala	Val	Phe	Ala	Val	Gly	Ala	Gln	Ser	Thr	Glu
				770					775					780
Gly	Trp	Asp	Phe	Leu	Tyr	Ser	Lys	Tyr	Gln	Phe	Ser	Leu	Ser	Ser
				785					790					795
Thr	Glu	Lys	Ser	Gln	Ile	Glu	Phe	Ala	Leu	Cys	Arg	Thr	Gln	Asn
				800					805					810
Lys	Glu	Lys	Leu	Gln	Trp	Leu	Leu	Asp	Glu	Ser	Phe	Lys	Gly	Asp
				815					820					825
Lys	Ile	Lys	Thr	Gln	Glu	Phe	Pro	Gln	Ile	Leu	Thr	Leu	Ile	Gly
				830					835					840
Arg	Asn	Pro	Val	Gly	Tyr	Pro	Leu	Ala	Trp	Gln	Phe	Leu	Arg	Lys
				845					850					855
Asn	Trp	Asn	Lys	Leu	Val	Gln	Lys	Phe	Glu	Leu	Gly	Ser	Ser	Ser
				860					865					870
Ile	Ala	His	Met	Val	Met	Gly	Thr	Thr	Asn	Gln	Phe	Ser	Thr	Arg
				875					880					885
Thr	Arg	Leu	Glu	Glu	Val	Lys	Gly	Phe	Phe	Ser	Ser	Leu	Lys	Glu
				890					895					900
Asn	Gly	Ser	Gln	Leu	Arg	Cys	Val	Gln	Gln	Thr	Ile	Glu	Thr	Ile

	905		910		915
Glu Glu Asn Ile Gly Trp Met Asp Lys Asn Phe Asp Lys Ile Arg					
	920		925		930
Val Trp Leu Gln Ser Glu Lys Leu Glu Arg Met					
	935		940		

<210> 354  
 <211> 1587  
 <212> DNA  
 <213> Homo sapiens

<400> 354  
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 gttcagcatg tgtggaaggt gtccgaccta ccccggaat ggacccctaa 150  
 gaacaccagc tgcgacagcg gcttgggggtg ccaggacacg ttgatgctca 200  
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250  
 gccaaaggacc aggagccccg cgtcactgag caccggatgg gccccggcct 300  
 ctccctgata tcctacacct tcgtgtgccg ccaggaggac ttctgcaaca 350  
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 gcccggtgggt atgactgaga actgcaatag gaaagatttt ctgacctgtc 650  
 atcggggggac caccattatg acacacggaa acttggtctca agaaccact 700  
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 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctggtgggga 800  
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 gtgcagcccc ttggaacctg ttcaagtggc tcccccgaa tgacctgccc 1050  
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ggctgtccac caaaatgagc attcagggct gcgtggccca accttccagc 1150  
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 gcgtgatgtg cagcctcctg cctctcagca tgagggaggt ggggctgagg 1250  
 gcctggagtc tctcacttgg ggggtggggc tggcactggc cccagcgctg 1300  
 tgggtggggag tggtttgccc ttctgctaa ctctattacc cccacgattc 1350  
 ttcaccgctg ctgaccaccc aactcaacc tccctctgac ctcataacct 1400  
 aatggccttg gacaccagat tctttcccat tctgtccatg aatcatcttc 1450  
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500  
 gcctggagca tccggacttg ccctatggga gaggggacgc tggaggagtg 1550  
 gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro
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Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln
				20					25					30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys
				35					40					45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met
				50					55					60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly
				65					70					75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg
				80					85					90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg
				95					100					105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp
				110					115					120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val
				125					130					135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile
				140					145					150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu
				155					160					165

Arg Gly Gly Gly	Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys Met
170		175 180
Pro Gln Pro Gly	Cys Asn Leu Leu Asn Gly Thr Gln Glu Ile Gly	
185		190 195
Pro Val Gly Met	Thr Glu Asn Cys Asn Arg Lys Asp Phe Leu Thr	
200		205 210
Cys His Arg Gly	Thr Thr Ile Met Thr His Gly Asn Leu Ala Gln	
215		220 225
Glu Pro Thr Asp	Trp Thr Thr Ser Asn Thr Glu Met Cys Glu Val	
230		235 240
Gly Gln Val Cys	Gln Glu Thr Leu Leu Leu Ile Asp Val Gly Leu	
245		250 255
Thr Ser Thr Leu	Val Gly Thr Lys Gly Cys Ser Thr Val Gly Ala	
260		265 270
Gln Asn Ser Gln	Lys Thr Thr Ile His Ser Ala Pro Pro Gly Val	
275		280 285
Leu Val Ala Ser	Tyr Thr His Phe Cys Ser Ser Asp Leu Cys Asn	
290		295 300
Ser Ala Ser Ser	Ser Ser Val Leu Leu Asn Ser Leu Pro Pro Gln	
305		310 315
Ala Ala Pro Val	Pro Gly Asp Arg Gln Cys Pro Thr Cys Val Gln	
320		325 330
Pro Leu Gly Thr	Cys Ser Ser Gly Ser Pro Arg Met Thr Cys Pro	
335		340 345
Arg Gly Ala Thr	His Cys Tyr Asp Gly Tyr Ile His Leu Ser Gly	
350		355 360
Gly Gly Leu Ser	Thr Lys Met Ser Ile Gln Gly Cys Val Ala Gln	
365		370 375
Pro Ser Ser Phe	Leu Leu Asn His Thr Arg Gln Ile Gly Ile Phe	
380		385 390
Ser Ala Arg Glu	Lys Arg Asp Val Gln Pro Pro Ala Ser Gln His	
395		400 405
Glu Gly Gly Gly	Ala Glu Gly Leu Glu Ser Leu Thr Trp Gly Val	
410		415 420
Gly Leu Ala Leu	Ala Pro Ala Leu Trp Trp Gly Val Val Cys Pro	
425		430 435
Ser Cys		

<210> 356



<211> 1238  
<212> DNA  
<213> Homo sapiens

<400> 356  
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tcagcctggc cttcctgtca ctgctgccat ctggacatcc tcagccggct 150  
ggcgatgacg cctgctctgt gcagatcctc gtccctggcc tcaaagggga 200  
tgccggagag aaggagagaca aaggcgcccc cggacggcct ggaagagtcg 250  
gccccacggg agaaaaagga gacatggggg acaaaggaca gaaaggcagt 300  
gtgggtcgtc atggaaaaat tggctccatt ggctctaaag gtgagaaagg 350  
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catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450  
gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgccgg 500  
tgtgcgcgag acggagagca agatctacc! gctggtgaag gaggagaagc 550  
gtacgcgga cgccagctg tcctgccagg gccgcggggg cacgctgagc 600  
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ggccttctgt gtactctgac cactcccca tgccgacctt caacaagtgg 750  
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accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000  
tgagtagagg gctgttgtct aaactgagaa aatggcctat gcttaagagg 1050  
aaaatgaaag tgttcctggg gtgctgtctc tgaagaagca gagtttcatt 1100  
acctgtattg tagcccaat gtcattatgt aattattacc cagaattgct 1150  
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tagtgcagta gttaagtcca aaaaaaaaaa aaaaaaaaa 1238

<210> 357  
<211> 271  
<212> PRT

<213> Homo sapiens

<400> 357

Met	Arg	Gly	Asn	Leu	Ala	Leu	Val	Gly	Val	Leu	Ile	Ser	Leu	Ala	
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Phe	Leu	Ser	Leu	Leu	Pro	Ser	Gly	His	Pro	Gln	Pro	Ala	Gly	Asp	
				20					25					30	
Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	
				35					40					45	
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	
				50					55					60	
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	
				65					70					75	
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	
				80					85					90	
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	
				95					100					105	
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	
				110					115					120	
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	
				125					130					135	
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	
				140					145					150	
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	
				155					160					165	
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	
				170					175					180	
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	
				185					190					195	
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	
				200					205					210	
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	
				215					220					225	
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	
				230					235					240	
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	
				245					250					255	
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	
				260					265					270	

Met

<210> 358  
 <211> 972  
 <212> DNA  
 <213> Homo sapiens

<400> 358  
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 gttccttgat cctgccagac caccagccc ccggcacaga gctgctccac 150  
 aggccaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200  
 tagctcagag ctttggggct gtctgtaagg agccacagga ggaggtggtt 250  
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgctcca 300  
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 gccaggctag cacagatcct aaggaatcaa catctcccga gaaacgtgac 400  
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450  
 gggaaagaca ggacctttct taccctcagt gagggttcct cggccccctc 500  
 atcccaatca gcttgatcc acaggaaagt cttccctggg aacagaggag 550  
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 caggtgcgca cgctcctgtt accctttctc ttccctgttc ttgtaacatt 750  
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 actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaatacc 850  
 ctagagttcc tgtagtgtcc tacattaata atataatgtc tctctctatt 900  
 cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950  
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 359  
 Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu  
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 Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val  
 20 25 30

Val	Pro	Gly	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Pro	Asp	Leu	Tyr	Gln
				35					40					45
Leu	Leu	Gln	Arg	Leu	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu
				50					55					60
Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr
				65					70					75
Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met
				80					85					90
Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu
				95					100					105
Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly
				110					115					120
Ser	Thr	Gly	Lys	Ser	Ser	Leu	Gly	Thr	Glu	Glu	Gln	Arg	Pro	Leu
				125					130					135

<210> 360

<211> 1738

<212> DNA

<213> Homo sapiens

<400> 360

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<211> 159

<212> PRT

<213> Homo sapiens

<400> 361

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				20					25					30
Leu	Glu	Glu	Leu	Leu	Ser	Lys	Tyr	Gln	His	Asn	Glu	Ser	His	Ser
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Arg	Val	Arg	Arg	Ala	Ile	Pro	Arg	Glu	Asp	Lys	Glu	Glu	Ile	Leu
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Met	Leu	His	Asn	Lys	Leu	Arg	Gly	Gln	Val	Gln	Pro	Gln	Ala	Ser
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Asn	Met	Glu	Tyr	Met	Val	Ser	Ala	Gly	Ser	Gly	Arg	Arg	Gly	Trp
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His	Arg	Gly	Trp	Gly	Leu	Gly	His	Gln	Pro	Ala	Leu	Phe	Pro	Ser
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Gln	Leu	Cys	Ser	Pro	Ala	Ser	Ala	Cys	Asp	Gly	Trp	Leu	Arg	Val
				110					115					120
Ser	Ser	Gly	Arg	Gly	Gly	Ser	Arg	Leu	Cys	Ser	Val	Leu	Phe	Val
				125					130					135
Cys	Phe	Glu	Thr	Gly	Ser	His	Ser	Ala	Thr	Asp	Ala	Gly	Val	Gln
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 <211> 422  
 <212> DNA  
 <213> Homo sapiens

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 <211> 78  
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 <213> Homo sapiens

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Ser	Ser	His	Gly	Thr	Gly	Pro	Gly	Met	Thr	Leu	Gln	Leu	Lys	Leu
				20				25						30
Lys	Glu	Ser	Phe	Leu	Thr	Asn	Ser	Ser	Tyr	Glu	Ser	Ser	Phe	Leu
				35				40						45
Glu	Leu	Leu	Glu	Lys	Leu	Cys	Leu	Leu	Leu	His	Leu	Pro	Ser	Gly

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Cys Asn Thr

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 <211> 67  
 <212> PRT  
 <213> Homo sapiens

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Phe	Ser	Val	Glu	Asn	Glu	Cys	Leu	Val	Asp	Leu	Cys	Leu	Leu	Arg
			35						40					45
Ile	Cys	Tyr	Lys	Leu	Ser	Gly	Val	Pro	Asn	Gln	Cys	Arg	Val	Pro
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Leu	Pro	Ser	Asp	Cys	Ser	Lys								
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<210> 366

<211> 2475

<212> DNA

<213> Homo sapiens

<400> 366

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 <211> 402  
 <212> PRT  
 <213> Homo sapiens

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 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe  
                     50                    55                    60  
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln  
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 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly  
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 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr  
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 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn  
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 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile

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Pro	Gly	Thr	His	Ser	His	Leu	Val	Leu	Thr	Lys	Ile	Glu	Pro	Gly
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Thr	Leu	Gly	Val	Glu	His	Ser	Trp	Asp	Thr	Pro	Cys	Arg	Ser	Gln
				305					310					315
Asp	Ala	Glu	Ala	Ser	Phe	Leu	Leu	Cys	Gly	Val	Leu	Tyr	Val	Val
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Tyr	Ser	Thr	Gly	Gly	Gln	Gly	Pro	His	Arg	Ile	Thr	Cys	Ile	Tyr
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Asp	Pro	Leu	Gly	Thr	Ile	Ser	Glu	Glu	Asp	Leu	Pro	Asn	Leu	Phe
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Phe	Pro	Lys	Arg	Pro	Arg	Ser	His	Ser	Met	Ile	His	Tyr	Asn	Pro
				365					370					375
Arg	Asp	Lys	Gln	Leu	Tyr	Ala	Trp	Asn	Glu	Gly	Asn	Gln	Ile	Ile
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Tyr	Lys	Leu	Gln	Thr	Lys	Arg	Lys	Leu	Pro	Leu	Lys			
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<210> 368

<211> 2281

<212> DNA

<213> Homo sapiens

<400> 368

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 <212> PRT  
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 Gln Lys Gln Tyr Gln Arg Ile Arg Lys Glu Lys Pro Gln Gln His  
 65 70 75  
 Asn Phe Thr His Arg Leu Leu Ala Ala Ala Leu Lys Ser His Ser  
 80 85 90  
 Gly Asn Ile Ser Cys Met Asp Phe Ser Ser Asn Gly Lys Tyr Leu  
 95 100 105  
 Ala Thr Cys Ala Asp Asp Arg Thr Ile Arg Ile Trp Ser Thr Lys  
 110 115 120  
 Asp Phe Leu Gln Arg Glu His Arg Ser Met Arg Ala Asn Val Glu  
 125 130 135  
 Leu Asp His Ala Thr Leu Val Arg Phe Ser Pro Asp Cys Arg Ala  
 140 145 150  
 Phe Ile Val Trp Leu Ala Asn Gly Asp Thr Leu Arg Val Phe Lys  
 155 160 165  
 Met Thr Lys Arg Glu Asp Gly Gly Tyr Thr Phe Thr Ala Thr Pro  
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 185 190 195  
 Ile Ala Asn Thr Gly Lys Phe Ile Met Thr Ala Ser Ser Asp Thr  
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Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
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<211> 1415

<212> DNA

<213> Homo sapiens

<400> 370

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<210> 371

<211> 105

<212> PRT

<213> Homo sapiens

<400> 371

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Val	Ser	Asp	Cys	Ala	Val	Ile	Thr	Gly	Ala	Cys	Glu	Arg	Asp	Val
				20					25					30
Gln	Cys	Gly	Ala	Gly	Thr	Cys	Cys	Ala	Ile	Ser	Leu	Trp	Leu	Arg
				35					40					45
Gly	Leu	Arg	Met	Cys	Thr	Pro	Leu	Gly	Arg	Glu	Gly	Glu	Glu	Cys
				50					55					60
His	Pro	Gly	Ser	His	Lys	Val	Pro	Phe	Phe	Arg	Lys	Arg	Lys	His
				65					70					75
His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
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<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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 tactctcagt atggattatt aatgtatfff aatattctgt ttagggccac 900  
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 gaggattatt aagctaaaaac ctgggaaata ggaggcttaa aattgactgc 1000  
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 ggcaggcacc tgtagtccca gctaccggg aggtgaggc aggagaatca 1200  
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<210> 373

<211> 229

<212> PRT

<213> Homo sapiens

<400> 373

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Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu
				20					25				30	
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala
				35					40				45	
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu
				50					55				60	
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala
				65					70				75	
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu
				80					85				90	
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu
				95					100				105	
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu
				110					115				120	
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp
				125					130				135	
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe
				140					145				150	

Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala
				155					160					165
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile
				170					175					180
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu
				185					190					195
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu
				200					205					210
Ser	Val	Leu	Glu	Ala	Ala	Lys	Met	Ile	Lys	Pro	Gln	Thr	Leu	Ala
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Ser Glu Lys Lys

<210> 374  
 <211> 744  
 <212> DNA  
 <213> Homo sapiens

<400> 374  
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 gcggtaggag gggcgagcgc gagaagcccc ttctctggcg ctgccaaccc 150  
 gccaccagc ccatggcgaa ccccggtctg gggctgcttc tggcgctggg 200  
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 ccacttctgc aaatgagaat agcactgttt tgccttcac caccagctcc 300  
 agctccgatg gcaacctgcg tccggaagcc atcactgcta tcatcgtggt 350  
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 tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 375

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Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln	Thr
				20					25					30
Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser
				35					40					45
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile
				50					55					60
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly
				65					70					75
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu
				80					85					90
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala	Ala
				95					100					105
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys
				110					115					120

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376

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tgactcaaga gggttaattc ttggtgctga agcctggggc aggggtgtaa 350  
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 <210> 377  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens  
 <400> 377  
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 Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser  
 35 40 45  
 Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr  
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 <211> 3265  
 <212> DNA  
 <213> Homo sapiens  
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 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200  
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 cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550

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<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp	35	40	45	
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser	50	55	60	
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn	65	70	75	
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr	80	85	90	
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val	95	100	105	
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln	110	115	120	
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro	125	130	135	
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly	140	145	150	
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	155	160	165	
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys	170	175	180	
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn	185	190	195	
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys	200	205	210	
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe	215	220	225	
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met	230	235	240	
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His	245	250	255	
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg	260	265	270	
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr	275	280	285	
Ile	Pro	Met	Val	Thr	Pro	Pro	Pro	Pro	Pro	Val	Phe	Ser	Leu	Leu				

290										295					300				
Lys	Ile	Ser	Gln	Arg	Ile	Val	Cys	Leu	Val	Leu	Asp	Lys	Ser	Gly					
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Ser	Met	Gly	Gly	Lys	Asp	Arg	Leu	Asn	Arg	Met	Asn	Gln	Ala	Ala					
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Lys	His	Phe	Leu	Leu	Gln	Thr	Val	Glu	Asn	Gly	Ser	Trp	Val	Gly					
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Gln	Ile	Lys	Ser	Ser	Asp	Glu	Arg	Asn	Thr	Leu	Met	Ala	Gly	Leu					
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Pro	Thr	Tyr	Pro	Leu	Gly	Gly	Thr	Ser	Ile	Cys	Ser	Gly	Ile	Lys					
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Tyr	Ala	Phe	Gln	Val	Ile	Gly	Glu	Leu	His	Ser	Gln	Leu	Asp	Gly					
				395					400					405					
Ser	Glu	Val	Leu	Leu	Leu	Thr	Asp	Gly	Glu	Asp	Asn	Thr	Ala	Ser					
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Ser	Cys	Ile	Asp	Glu	Val	Lys	Gln	Ser	Gly	Ala	Ile	Val	His	Phe					
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Ile	Ala	Leu	Gly	Arg	Ala	Ala	Asp	Glu	Ala	Val	Ile	Glu	Met	Ser					
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Lys	Ile	Thr	Gly	Gly	Ser	His	Phe	Tyr	Val	Ser	Asp	Glu	Ala	Gln					
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Thr	Asp	Leu	Ser	Gln	Lys	Ser	Leu	Gln	Leu	Glu	Ser	Lys	Gly	Leu					
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Thr	Leu	Asn	Ser	Asn	Ala	Trp	Met	Asn	Asp	Thr	Val	Ile	Ile	Asp					
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Ser	Thr	Val	Gly	Lys	Asp	Thr	Phe	Phe	Leu	Ile	Thr	Trp	Asn	Ser					
				515					520					525					
Leu	Pro	Pro	Ser	Ile	Ser	Leu	Trp	Asp	Pro	Ser	Gly	Thr	Ile	Met					
				530					535					540					
Glu	Asn	Phe	Thr	Val	Asp	Ala	Thr	Ser	Lys	Met	Ala	Tyr	Leu	Ser					
				545					550					555					
Ile	Pro	Gly	Thr	Ala	Lys	Val	Gly	Thr	Trp	Ala	Tyr	Asn	Leu	Gln					
				560					565					570					
Ala	Lys	Ala	Asn	Pro	Glu	Thr	Leu	Thr	Ile	Thr	Val	Thr	Ser	Arg					
				575					580					585					



Ala	Ala	Asn	Ser	Ser	Val	Pro	Pro	Ile	Thr	Val	Asn	Ala	Lys	Met	590	595	600
Asn	Lys	Asp	Val	Asn	Ser	Phe	Pro	Ser	Pro	Met	Ile	Val	Tyr	Ala	605	610	615
Glu	Ile	Leu	Gln	Gly	Tyr	Val	Pro	Val	Leu	Gly	Ala	Asn	Val	Thr	620	625	630
Ala	Phe	Ile	Glu	Ser	Gln	Asn	Gly	His	Thr	Glu	Val	Leu	Glu	Leu	635	640	645
Leu	Asp	Asn	Gly	Ala	Gly	Ala	Asp	Ser	Phe	Lys	Asn	Asp	Gly	Val	650	655	660
Tyr	Ser	Arg	Tyr	Phe	Thr	Ala	Tyr	Thr	Glu	Asn	Gly	Arg	Tyr	Ser	665	670	675
Leu	Lys	Val	Arg	Ala	His	Gly	Gly	Ala	Asn	Thr	Ala	Arg	Leu	Lys	680	685	690
Leu	Arg	Pro	Pro	Leu	Asn	Arg	Ala	Ala	Tyr	Ile	Pro	Gly	Trp	Val	695	700	705
Val	Asn	Gly	Glu	Ile	Glu	Ala	Asn	Pro	Pro	Arg	Pro	Glu	Ile	Asp	710	715	720
Glu	Asp	Thr	Gln	Thr	Thr	Leu	Glu	Asp	Phe	Ser	Arg	Thr	Ala	Ser	725	730	735
Gly	Gly	Ala	Phe	Val	Val	Ser	Gln	Val	Pro	Ser	Leu	Pro	Leu	Pro	740	745	750
Asp	Gln	Tyr	Pro	Pro	Ser	Gln	Ile	Thr	Asp	Leu	Asp	Ala	Thr	Val	755	760	765
His	Glu	Asp	Lys	Ile	Ile	Leu	Thr	Trp	Thr	Ala	Pro	Gly	Asp	Asn	770	775	780
Phe	Asp	Val	Gly	Lys	Val	Gln	Arg	Tyr	Ile	Ile	Arg	Ile	Ser	Ala	785	790	795
Ser	Ile	Leu	Asp	Leu	Arg	Asp	Ser	Phe	Asp	Asp	Ala	Leu	Gln	Val	800	805	810
Asn	Thr	Thr	Asp	Leu	Ser	Pro	Lys	Glu	Ala	Asn	Ser	Lys	Glu	Ser	815	820	825
Phe	Ala	Phe	Lys	Pro	Glu	Asn	Ile	Ser	Glu	Glu	Asn	Ala	Thr	His	830	835	840
Ile	Phe	Ile	Ala	Ile	Lys	Ser	Ile	Asp	Lys	Ser	Asn	Leu	Thr	Ser	845	850	855
Lys	Val	Ser	Asn	Ile	Ala	Gln	Val	Thr	Leu	Phe	Ile	Pro	Gln	Ala	860	865	870
Asn	Pro	Asp	Asp	Ile	Asp	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Pro			

	875		880		885
Thr Pro Asp Lys Ser His Asn Ser Gly Val Asn Ile Ser Thr Leu					
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Val Leu Ser Val Ile Gly Ser Val Val Ile Val Asn Phe Ile Leu					
	905		910		915
Ser Thr Thr Ile					

<210> 380  
 <211> 3877  
 <212> DNA  
 <213> Homo sapiens

<400> 380  
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 caatcacctg ccttacacgg cctctgattt catagaaggg atctaccgaa 1300  
 cagaaagggg caaagggaca ttgtatgagc tcaccttcaa aggggaccac 1350  
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<210> 381

<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

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Val	Val	Leu	Leu	Val	Leu	Leu	Cys	Cys	Ala	Ile	Ser	Val	Leu	Tyr	
				20					25					30	
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu	
				35					40					45	
Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val	
				50					55					60	
Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu	
				65					70					75	
Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser	
				80					85					90	
Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	
				95					100					105	
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	
				110					115					120	
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	
				125					130					135	
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	
				140					145					150	
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	
				155					160					165	
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	
				170					175					180	
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	
				185					190					195	
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	
				200					205					210	
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	
				215					220					225	
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	
				230					235					240	
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	
				245					250					255	
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	
				260					265					270	

Lys Arg Val Asp	Lys Phe Arg Gln Phe Met Gln Asn Phe Arg Glu	275	280	285
Met Cys Ile Glu	Gln Asp Gly Arg Val His Leu Thr Val Val Tyr	290	295	300
Phe Gly Lys Glu	Glu Ile Asn Glu Val Lys Gly Ile Leu Glu Asn	305	310	315
Thr Ser Lys Ala	Ala Asn Phe Arg Asn Phe Thr Phe Ile Gln Leu	320	325	330
Asn Gly Glu Phe	Ser Arg Gly Lys Gly Leu Asp Val Gly Ala Arg	335	340	345
Phe Trp Lys Gly	Ser Asn Val Leu Leu Phe Phe Cys Asp Val Asp	350	355	360
Ile Tyr Phe Thr	Ser Glu Phe Leu Asn Thr Cys Arg Leu Asn Thr	365	370	375
Gln Pro Gly Lys	Lys Val Phe Tyr Pro Val Leu Phe Ser Gln Tyr	380	385	390
Asn Pro Gly Ile	Ile Tyr Gly His His Asp Ala Val Pro Pro Leu	395	400	405
Glu Gln Gln Leu	Val Ile Lys Lys Glu Thr Gly Phe Trp Arg Asp	410	415	420
Phe Gly Phe Gly	Met Thr Cys Gln Tyr Arg Ser Asp Phe Ile Asn	425	430	435
Ile Gly Gly Phe	Asp Leu Asp Ile Lys Gly Trp Gly Gly Glu Asp	440	445	450
Val His Leu Tyr	Arg Lys Tyr Leu His Ser Asn Leu Ile Val Val	455	460	465
Arg Thr Pro Val	Arg Gly Leu Phe His Leu Trp His Glu Lys Arg	470	475	480
Cys Met Asp Glu	Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln	485	490	495
Ser Lys Ala Met	Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu	500	505	510
Val Phe Arg His	Glu Ile Glu Ala His Leu Arg Lys Gln Lys Gln	515	520	525
Lys Thr Ser Ser	Lys Lys Thr	530		

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 382  
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 <210> 383  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 383  
 gcgaaggtga gcctctatct cgtgcc 26  
  
 <210> 384  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 384  
 cagcctacac gtattgagg 19  
  
 <210> 385  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 385  
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 <210> 386  
 <211> 1346  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 386  
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 gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150  
 ctcttcaaag cgatggtagc tttctccatg agaaaagttc ccaacagaga 200  
 agcaacagaa atttcccatg toctactttg caatgtaacc cagaggggtat 250  
 cattctgggtt tgtggttaca gacccttcaa aaaatcacac ccttctgct 300  
 gttgagggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350

cttctttcta aatgaccaaa ctctggaatt tttaaaaatc ccttccacac 400  
 ttgcaccacc catggacca tctgtgccca tctggattat tatatttggt 450  
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 gatgagaggg tcacccctct ctgaagggct gttgttctgc ttcctcaaga 700  
 aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750  
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<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

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Leu	Cys	Gln	Pro	Gly	Ala	Glu	Asn	Ala	Phe	Lys	Val	Arg	Leu	Ser
				20					25					30
Ile	Arg	Thr	Ala	Leu	Gly	Asp	Lys	Ala	Tyr	Ala	Trp	Asp	Thr	Asn
				35					40					45
Glu	Glu	Tyr	Leu	Phe	Lys	Ala	Met	Val	Ala	Phe	Ser	Met	Arg	Lys
				50					55					60



Val	Pro	Asn	Arg	Glu	Ala	Thr	Glu	Ile	Ser	His	Val	Leu	Leu	Cys	
				65					70					75	
Asn	Val	Thr	Gln	Arg	Val	Ser	Phe	Trp	Phe	Val	Val	Thr	Asp	Pro	
				80					85					90	
Ser	Lys	Asn	His	Thr	Leu	Pro	Ala	Val	Glu	Val	Gln	Ser	Ala	Ile	
				95					100					105	
Arg	Met	Asn	Lys	Asn	Arg	Ile	Asn	Asn	Ala	Phe	Phe	Leu	Asn	Asp	
				110					115					120	
Gln	Thr	Leu	Glu	Phe	Leu	Lys	Ile	Pro	Ser	Thr	Leu	Ala	Pro	Pro	
				125					130					135	
Met	Asp	Pro	Ser	Val	Pro	Ile	Trp	Ile	Ile	Ile	Phe	Gly	Val	Ile	
				140					145					150	
Phe	Cys	Ile	Ile	Ile	Val	Ala	Ile	Ala	Leu	Leu	Ile	Leu	Ser	Gly	
				155					160					165	
Ile	Trp	Gln	Arg	Arg	Arg	Lys	Asn	Lys	Glu	Pro	Ser	Glu	Val	Asp	
				170					175					180	
Asp	Ala	Glu	Asp	Lys	Cys	Glu	Asn	Met	Ile	Thr	Ile	Glu	Asn	Gly	
				185					190					195	
Ile	Pro	Ser	Asp	Pro	Leu	Asp	Met	Lys	Gly	Gly	Ile	Leu	Met	Met	
				200					205					210	

Pro Ser

<210> 388  
 <211> 1371  
 <212> DNA  
 <213> Homo sapiens

<400> 388  
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 ttaagacact acttacagtg ttatgacttg tatacacata tattggtatc 1100  
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 acagtaaadc ctaaattcaa actgttaaact gacattttta tttttatgtc 1300  
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 ccaggtgata gattttttgtc g 1371

<210> 389

<211> 215

<212> PRT

<213> Homo sapiens

<400> 389

Met	Tyr	Gly	Lys	Ser	Ser	Thr	Arg	Ala	Val	Leu	Leu	Leu	Leu	Gly
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Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr
				20					25					30
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu
				35					40					45
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr
				50					55					60
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe
				65					70					75
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg

	80	85	90
Phe Lys Asp Arg Val Ser Trp Asp Gly Asn Pro Glu Arg Tyr Asp	95	100	105
Ala Ser Ile Leu Leu Trp Lys Leu Gln Phe Asp Asp Asn Gly Thr	110	115	120
Tyr Thr Cys Gln Val Lys Asn Pro Pro Asp Val Asp Gly Val Ile	125	130	135
Gly Glu Ile Arg Leu Ser Val Val His Thr Val Arg Phe Ser Glu	140	145	150
Ile His Phe Leu Ala Leu Ala Ile Gly Ser Ala Cys Ala Leu Met	155	160	165
Ile Ile Ile Val Ile Val Val Val Leu Phe Gln His Tyr Arg Lys	170	175	180
Lys Arg Trp Ala Glu Arg Ala His Lys Val Val Glu Ile Lys Ser	185	190	195
Lys Glu Glu Glu Arg Leu Asn Gln Glu Lys Lys Val Ser Val Tyr	200	205	210
Leu Glu Asp Thr Asp	215		

<210> 390  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 390  
 ccgaggccat ctagaggcca gagc 24

<210> 391  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 391  
 acaggcagag ccaatggcca gagc 24

<210> 392  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 392  
gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393  
<211> 471  
<212> DNA  
<213> Homo sapiens

<400> 393  
gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50  
agcagtcctg gtactcttgg gagtttccat ctttctggtc tctgcccaga 100  
atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150  
gatgatgaag cccctgatgc tgaaaccact gctgctgcaa cactgcgac 200  
cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250  
aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300  
gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350  
tattcatgct tctgtgatt tcatccaact acttaccttg cctacgatat 400  
cccccttata tctaatacgt tta'cttctt tcaaataaaa aataactatg 450  
agcaacataa aaaaaaaaaa a 471

<210> 394  
<211> 90  
<212> PRT  
<213> Homo sapiens

<400> 394  
Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe  
1 5 10 15  
Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr  
20 25 30  
Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu  
35 40 45  
Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr  
50 55 60  
Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val  
65 70 75  
Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro  
80 85 90

<210> 395  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 395  
 gctccctgat cttcatgtca ccacc 25  
  
 <210> 396  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 396  
 caggacaca ctctaccatt cgggag 26  
  
 <210> 397  
 <211> 42  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 397  
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 <213> Homo sapiens  
  
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 gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150  
 gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200  
 ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250  
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 gcaggagggg gacagttctg ttgtgcttgg ttggacagta agaggggtctt 350  
 ggccagtcca ggggtggggg cggcaaactc cataaagaac cagaggggtct 400  
 gggccccggc cacagagtca tctgccagc tcctctgctg ctggccagtg 450  
 ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500  
 gcctgcgggc catggtccct gtctagggca gcaattctca accttcttgc 550  
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agcaattaaa actgagaaat gggccgggca cgggtggctca cgctgtaat 650  
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 caagaccagc ctggccaaca tgggtgaaacc ttgtctacta aaaatacaaa 750  
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800  
 gctgaggcag gaaaatcgct tgaacccagg aggcggacgt tgcggtgagc 850  
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900  
 tcacaca 907

<210> 399  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 399  
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala  
 1 5 10 15  
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu  
 20 25 30  
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly  
 35 40 45  
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg  
 50 55 60  
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg  
 65 70 75  
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn  
 80 85 90  
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu  
 95 100 105  
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln  
 110 115 120

<210> 400  
 <211> 893  
 <212> DNA  
 <213> Homo sapiens

<400> 400  
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 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150  
 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200

cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250  
ggggccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300  
atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350  
gggggaggtg gcccaggcac agaaggtgct acgggacagc gtgcagcggc 400  
tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450  
gaggtcttaa aggctcacgc tgacaagcag agccacatcc tatgggccct 500  
cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550  
ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600  
atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650  
cgccccgtga ggcccctgtg caggaggagg ctgcctgttc actgggatca 700  
gccagggcgc cgggcccccac ttctgagcac agagcagaga cagacgcagg 750  
cggggacaaa ggagaggat gtagcccat tggggagggg tggaggaagg 800  
acatgtaccc tttcatgctt acacaccct cattaaagca gagtcgtggc 850  
atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401  
<211> 198  
<212> PRT  
<213> Homo sapiens

<400> 401  
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20 25 30  
Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu  
35 40 45  
Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu  
50 55 60  
Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu  
65 70 75  
Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu  
80 85 90  
Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu  
95 100 105  
Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala  
110 115 120

Gln	Ala	Gln	Lys	Val	Leu	Arg	Asp	Ser	Val	Gln	Arg	Leu	Glu	Val
				125					130					135
Gln	Leu	Arg	Ser	Ala	Trp	Leu	Gly	Pro	Ala	Tyr	Arg	Glu	Phe	Glu
				140					145					150
Val	Leu	Lys	Ala	His	Ala	Asp	Lys	Gln	Ser	His	Ile	Leu	Trp	Ala
				155					160					165
Leu	Thr	Gly	His	Val	Gln	Arg	Gln	Arg	Arg	Glu	Met	Val	Ala	Gln
				170					175					180
Gln	His	Arg	Leu	Arg	Gln	Ile	Gln	Glu	Arg	Leu	His	Thr	Ala	Ala
				185					190					195

Leu Pro Ala

<210> 402  
 <211> 1915  
 <212> DNA  
 <213> Homo sapiens

<400> 402  
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 acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150  
 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200  
 tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250  
 aagttcacaa gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300  
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350  
 gaactccgac gaaatcaacg cctccaaga ctatggtaaa aggagcctgc 400  
 caggtgtcaa tgacttttgg ctgggcatca atgacatggc cacggaaggc 450  
 aagtttggtg acgtcaacgg aatcgctatc tccttcctca actgggaccg 500  
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550  
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600  
 atatgcgagt tcaccatccc taaataggtc tttctccaat gtgtcctcca 650  
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700  
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750  
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800  
 tgccttcctt ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850



gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900  
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ctcatcactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000  
gaagtttagc gtatgtttga ctaacaaaaa ttcctacat cagagactct 1050  
aggtgctata taatccaaaa acttttcagc ctggtgctca ttctgtccca 1100  
tgctggcaat aataccttgt cagcccatta cccttatttt gaattgctcc 1150  
atctcctggg gggacttgta tcttgctgc catatcagaa cacaaacccc 1200  
tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250  
ttggaagttt ccagccgcaa ttgaaatga aatgacaagg tgtatatttg 1300  
atcaattttc attcccacca ttgcattaca acctctaact taaatgggta 1350  
accctaaggc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400  
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attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700  
tggagggaaa tgggcttttt agaagcaaac aattttaaat atattttggt 1750  
cttcaaataa atagtgttta aacattgaat gtgttttggt aacaatatcc 1800  
cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850  
tcattgctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900  
aaaaaaaaa aaaaa 1915

<210> 403

<211> 206

<212> PRT

<213> Homo sapiens

<400> 403

Met	Ala	Gln	Gln	Ala	Cys	Pro	Arg	Ala	Met	Ala	Lys	Asn	Gly	Leu
1				5					10					15
Val	Ile	Cys	Ile	Leu	Val	Ile	Thr	Leu	Leu	Leu	Asp	Gln	Thr	Thr
				20					25					30
Ser	His	Thr	Ser	Arg	Leu	Lys	Ala	Arg	Lys	His	Ser	Lys	Arg	Arg
				35					40					45

Val	Arg	Asp	Lys	Asp	Gly	Asp	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Leu	50	55	60
Trp	Thr	Glu	Val	Asn	Ala	Leu	Lys	Glu	Ile	Gln	Ala	Leu	Gln	Thr	65	70	75
Val	Cys	Leu	Arg	Gly	Thr	Lys	Val	His	Lys	Lys	Cys	Tyr	Leu	Ala	80	85	90
Ser	Glu	Gly	Leu	Lys	His	Phe	His	Glu	Ala	Asn	Glu	Asp	Cys	Ile	95	100	105
Ser	Lys	Gly	Gly	Ile	Leu	Val	Ile	Pro	Arg	Asn	Ser	Asp	Glu	Ile	110	115	120
Asn	Ala	Leu	Gln	Asp	Tyr	Gly	Lys	Arg	Ser	Leu	Pro	Gly	Val	Asn	125	130	135
Asp	Phe	Trp	Leu	Gly	Ile	Asn	Asp	Met	Val	Thr	Glu	Gly	Lys	Phe	140	145	150
Val	Asp	Val	Asn	Gly	Ile	Ala	Ile	Ser	Phe	Leu	Asn	Trp	Asp	Arg	155	160	165
Ala	Gln	Pro	Asn	Gly	Gly	Lys	Arg	Glu	Asn	Cys	Val	Leu	Phe	Ser	170	175	180
Gln	Ser	Ala	Gln	Gly	Lys	Trp	Ser	Asp	Glu	Ala	Cys	Arg	Ser	Ser	185	190	195
Lys	Arg	Tyr	Ile	Cys	Glu	Phe	Thr	Ile	Pro	Lys					200	205	

<210> 404

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 404

cctggttatc cccaggaact ccgac 25

<210> 405

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 405

ctcttgctgc tgcgacaggc ctc 23

<210> 406

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 406

cgccctccaa gactatggta aaaggagcct gccaggtgtc aatgac 46

<210> 407

<211> 570

<212> DNA

<213> Homo sapiens

<400> 407

gcgaggaccg ggtataagaa gcctcgtggc cttgcccggg cagccgcagg 50  
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ggctctgcgt ggccctgtcc tgcagctccg ctgctgcttt cttagtgggc 150  
tcggccaagc ctgtggccca gctgtcgct gcgctggagt cggcggcgga 200  
ggcggggggc gggaccctgg ccaacccccct cggcaccctc aaccogctga 250  
agctcctgct gagcagcctg ggcatccccg tgaaccacct catagagggc 300  
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aaaccccgcc ggggggagga ccgtccatcc ccttcccccg gccctctca 500  
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<210> 408

<211> 104

<212> PRT

<213> Homo sapiens

<400> 408

Met	Lys	Leu	Ala	Ala	Leu	Leu	Gly	Leu	Cys	Val	Ala	Leu	Ser	Cys
1				5					10					15
Ser	Ser	Ala	Ala	Ala	Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala
				20					25					30
Gln	Pro	Val	Ala	Ala	Leu	Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly
				35					40					45
Thr	Leu	Ala	Asn	Pro	Leu	Gly	Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu
				50					55					60
Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	Asn	His	Leu	Ile	Glu	Gly	Ser
				65					70					75

Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val  
80 85 90

Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly  
95 100

<210> 409

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 409

tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50  
aagggaggca ctcccttgcc tccgcagccg atcacatgaa ggtggtgcc 100  
agtctcctgc tctccgtcct cctggcacag gtgtggctgg taccggctt 150  
ggccccagt cctcagtcgc cagagacccc agccccctcag aaccagacca 200  
gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250  
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gcagcagctt gccaaggaga cttcaaatc cggattcagc ctgctgcgaa 350  
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ccagatcaag agagggtcc acttgaggc cctgaagccc accaagccc 500  
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ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200  
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 aagtgactca tgggcgagga gcatagacag tgtggagaca ttgggcaagg 1850  
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 tggaattttt catttaatgt ttttggaacca tggttgacca tggttaactg 2000  
 agactgcaga aagcaaaacc atggataagg gaggactact acaaaagcat 2050  
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410

<211> 444

<212> PRT

<213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
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Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75

Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile	
				80					85					90	
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met	
				95					100					105	
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr	
				110					115					120	
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro	
				125					130					135	
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu	
				140					145					150	
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe	
				155					160					165	
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn	
				170					175					180	
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe	
				185					190					195	
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn	
				200					205					210	
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn	
				215					220					225	
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly	
				230					235					240	
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr	
				245					250					255	
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr	
				260					265					270	
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys	
				275					280					285	
His	Val	Leu	Lys	Leu	Pro	Tyr	Gln	Gly	Asn	Ala	Thr	Met	Leu	Val	
				290					295					300	
Val	Leu	Met	Glu	Lys	Met	Gly	Asp	His	Leu	Ala	Leu	Glu	Asp	Tyr	
				305					310					315	
Leu	Thr	Thr	Asp	Leu	Val	Glu	Thr	Trp	Leu	Arg	Asn	Met	Lys	Thr	
				320					325					330	
Arg	Asn	Met	Glu	Val	Phe	Phe	Pro	Lys	Phe	Lys	Leu	Asp	Gln	Lys	
				335					340					345	
Tyr	Glu	Met	His	Glu	Leu	Leu	Arg	Gln	Met	Gly	Ile	Arg	Arg	Ile	
				350					355					360	
Phe	Ser	Pro	Phe	Ala	Asp	Leu	Ser	Glu	Leu	Ser	Ala	Thr	Gly	Arg	

	365		370		375									
Asn	Leu	Gln	Val	Ser	Arg	Val	Leu	Arg	Arg	Thr	Val	Ile	Glu	Val
				380					385					390
Asp	Glu	Arg	Gly	Thr	Glu	Ala	Val	Ala	Gly	Ile	Leu	Ser	Glu	Ile
				395					400					405
Thr	Ala	Tyr	Ser	Met	Pro	Pro	Val	Ile	Lys	Val	Asp	Arg	Pro	Phe
				410					415					420
His	Phe	Met	Ile	Tyr	Glu	Glu	Thr	Ser	Gly	Met	Leu	Leu	Phe	Leu
				425					430					435
Gly	Arg	Val	Val	Asn	Pro	Thr	Leu	Leu						
				440										

<210> 411  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<400> 411  
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 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150  
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct ggggcgcccg 200  
 tgtggtggag cctccggaga aggacgacca gctggtggtg ctgttccttg 250  
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300  
 aggggccccca tccttcagg caccaaggcc tggatggaga ccgaggacac 350  
 cctgggccgt gtcctgagtc ccgagcccga ccatgacagc ctgtaccacc 400  
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450  
 ccaaatacacc aggtgctcct gggaccggag gaagaccaag accacatcta 500  
 ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550  
 ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600  
 aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412  
 <211> 151  
 <212> PRT  
 <213> Homo sapiens

<400> 412  
 Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu  
 1 5 10 15

Trp	Glu	Ala	Gly	Ala	Val	Pro	Ala	Pro	Lys	Val	Pro	Ile	Lys	Met
				20					25					30
Gln	Val	Lys	His	Trp	Pro	Ser	Glu	Gln	Asp	Pro	Glu	Lys	Ala	Trp
				35					40					45
Gly	Ala	Arg	Val	Val	Glu	Pro	Pro	Glu	Lys	Asp	Asp	Gln	Leu	Val
				50					55					60
Val	Leu	Phe	Pro	Val	Gln	Lys	Pro	Lys	Leu	Leu	Thr	Thr	Glu	Glu
				65					70					75
Lys	Pro	Arg	Gly	Gln	Gly	Arg	Gly	Pro	Ile	Leu	Pro	Gly	Thr	Lys
				80					85					90
Ala	Trp	Met	Glu	Thr	Glu	Asp	Thr	Leu	Gly	Arg	Val	Leu	Ser	Pro
				95					100					105
Glu	Pro	Asp	His	Asp	Ser	Leu	Tyr	His	Pro	Pro	Pro	Glu	Glu	Asp
				110					115					120
Gln	Gly	Glu	Glu	Arg	Pro	Arg	Leu	Trp	Val	Met	Pro	Asn	His	Gln
				125					130					135
Val	Leu	Leu	Gly	Pro	Glu	Glu	Asp	Gln	Asp	His	Ile	Tyr	His	Pro
				140					145					150

Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

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tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200
gtctccatct ctgccagaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tgttatctac 300
cagaccttct gtgacatgac ctctgggggt ggcggctgga ccctgggtggc 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400
ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
tgggccaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550

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ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600  
 ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650  
 gtttggcatc taccagaaat atccagtga atattggagaa ggaaagtgtt 700  
 ggactgacaa cggcccggtg atccctgtgg tctatgattt tggcgacgcc 750  
 cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800  
 gggatttggt cagttcaggg tatttaataa cgagagagca gccaacgcct 850  
 tgtgtgctgg aatgaggggc accggatgta aactgagca tcaactgcatt 900  
 ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950  
 ttctggtttt gattggagtg gatattggaac tcatgttggt tacagcagca 1000  
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050  
 tgtgggaggg aaccagacc tctcctcca accatgagat cccaaggatg 1100  
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150  
 taaatcatat tgaactcaaga aaaaaa 1176

<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

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Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys
				125					130					135

Asn	Pro	Gly	Tyr	Tyr	Asp	Ile	Gln	Ala	Lys	Asp	Leu	Gly	Ile	Trp	
				140					145					150	
His	Val	Pro	Asn	Lys	Ser	Pro	Met	Gln	His	Trp	Arg	Asn	Ser	Ser	
				155					160					165	
Leu	Leu	Arg	Tyr	Arg	Thr	Asp	Thr	Gly	Phe	Leu	Gln	Thr	Leu	Gly	
				170					175					180	
His	Asn	Leu	Phe	Gly	Ile	Tyr	Gln	Lys	Tyr	Pro	Val	Lys	Tyr	Gly	
				185					190					195	
Glu	Gly	Lys	Cys	Trp	Thr	Asp	Asn	Gly	Pro	Val	Ile	Pro	Val	Val	
				200					205					210	
Tyr	Asp	Phe	Gly	Asp	Ala	Gln	Lys	Thr	Ala	Ser	Tyr	Tyr	Ser	Pro	
				215					220					225	
Tyr	Gly	Gln	Arg	Glu	Phe	Thr	Ala	Gly	Phe	Val	Gln	Phe	Arg	Val	
				230					235					240	
Phe	Asn	Asn	Glu	Arg	Ala	Ala	Asn	Ala	Leu	Cys	Ala	Gly	Met	Arg	
				245					250					255	
Val	Thr	Gly	Cys	Asn	Thr	Glu	His	His	Cys	Ile	Gly	Gly	Gly	Gly	
				260					265					270	
Tyr	Phe	Pro	Glu	Ala	Ser	Pro	Gln	Gln	Cys	Gly	Asp	Phe	Ser	Gly	
				275					280					285	
Phe	Asp	Trp	Ser	Gly	Tyr	Gly	Thr	His	Val	Gly	Tyr	Ser	Ser	Ser	
				290					295					300	
Arg	Glu	Ile	Thr	Glu	Ala	Ala	Val	Leu	Leu	Phe	Tyr	Arg			
				305					310						

<210> 415

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 415

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tcggcgcgcg aggtgcttgg gccgcgctgc tcctggggac gctgcaggtg 150
ctagcgctgc tgggggcccgc ccatgaaagc gcagccatgg cggcatctgc 200
aaacatagag aattctgggc ttccacacaa ctccagtgtc aactcaacag 250
agactctcca acatgtgctt tctgaccata caaatgaaac ttccaacagt 300
actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350
caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400

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tctcaacaaa tatgacttct accaccttaa agtctacacc caaaacaaca 450  
agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500  
ccacaatagt tcagtgcacat ctgctgcttc atcagtaaca atcacaacaa 550  
ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600  
gttggtggta ttgtattaac gctgggagtt ttatctattc tttacattgg 650  
atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700  
aacatgatgc catcatTTaa ggaaatccat ggaccaagga tggaatacag 750  
attgatgctg ccctatcaat taattttggt ttattaatag tttaaaacaa 800  
tattctcttt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850  
gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900  
tgaaataaac atctggatct tatagaccgt tcatacaatg gtttttagcaa 950  
gttcatagta agacaaacaa gtcctatctt ttttttttgg ctggggtggg 1000  
ggcattggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050  
agaatgccat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100  
tttgggtatc ttttgtagct cacataaaga acttcagtgc ttttcagagc 1150  
tggatatatc ttaattacta atgccacaca gaaattatac aatcaaacta 1200  
gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250  
tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

Met	Gly	Leu	Gly	Ala	Arg	Gly	Ala	Trp	Ala	Ala	Leu	Leu	Leu	Gly
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Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala
				20				25						30
Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His
				35				40						45
Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser
				50				55						60
Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr
				65				70						75
Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys

	80		85		90
Pro Thr Ala Ala	Ser Asn Thr Thr Thr	Pro Gly Met Val Ser Thr			
	95	100		105	
Asn Met Thr Ser	Thr Thr Leu Lys Ser	Thr Pro Lys Thr Thr Ser			
	110	115		120	
Val Ser Gln Asn	Thr Ser Gln Ile Ser	Thr Ser Thr Met Thr Val			
	125	130		135	
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr Ile			
	140	145		150	
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe Asp			
	155	160		165	
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val Leu			
	170	175		180	
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg Gly			
	185	190		195	
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200	205			

<210> 417  
 <211> 1728  
 <212> DNA  
 <213> Homo sapiens

<400> 417  
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 gcgatggcga ccctgtgggg aggccttctt cggcttggtc ccttgctcag 150  
 cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200  
 ccgccaagaa ttctgaggat gtcagatgta aatgtatctg ccctccctat 250  
 aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300  
 tgattgcctt catgttgtgg agcccatgcc tgtgcggggg cctgatgtag 350  
 aagcatactg tctacgctgt gaatgcaa atgaagaaag aagctctgtc 400  
 acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450  
 tctgtacatg gtatatctta ctctggttga gcccatactg aagaggcgcc 500  
 tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550  
 cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600  
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650

tccaagagca gcgaaagtct gtctttgacc ggcattgttg cctcagctaa 700  
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750  
 agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800  
 ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850  
 ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900  
 aaagtcagcc aataagtctt ttcctatttg tgacttttac taataaaaat 950  
 aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000  
 ctttttcacc acatagtttt aacttgactt tcaagataat tttcaggggt 1050  
 tttgttggtg ttgttttttg tttgtttgtt ttggtgggag aggggagggg 1100  
 tgcctgggaa gtggttaaca acttttttca agtcacttta cttaaacaac 1150  
 ttttgtaaag agaccttacc ttctattttc gagtttcatt tatattttgc 1200  
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250  
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300  
 atctaaaatg cctggtggct tttcacaaa agcagatttt cttcatgtac 1350  
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca tttgctagtt 1400  
 tactctaaag actaaacata gtcttggtgt gtgtggtctt actcatcttc 1450  
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500  
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550  
 tcagcatttc cggtcgtggt gagaggcagc tgtttgagct ccaatatgtg 1600  
 cagctttgaa ctagggctgg ggttggtggg gcctcttctg aaaggtctaa 1650  
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<210> 418

<211> 198

<212> PRT

<213> Homo sapiens

<400> 418

Met	Ala	Thr	Leu	Trp	Gly	Gly	Leu	Leu	Arg	Leu	Gly	Ser	Leu	Leu
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Ser	Leu	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Leu	Ala	Gln	Leu
				20					25					30
Ser	Asp	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile
				35					40					45

Cys	Pro	Pro	Tyr	Lys	Glu	Asn	Ser	Gly	His	Ile	Tyr	Asn	Lys	Asn	50	55	60
Ile	Ser	Gln	Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met	65	70	75
Pro	Val	Arg	Gly	Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu	80	85	90
Cys	Lys	Tyr	Glu	Glu	Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile	95	100	105
Ile	Ile	Tyr	Leu	Ser	Ile	Leu	Gly	Leu	Leu	Leu	Leu	Tyr	Met	Val	110	115	120
Tyr	Leu	Thr	Leu	Val	Glu	Pro	Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly	125	130	135
His	Ala	Gln	Leu	Ile	Gln	Ser	Asp	Asp	Asp	Ile	Gly	Asp	His	Gln	140	145	150
Pro	Phe	Ala	Asn	Ala	His	Asp	Val	Leu	Ala	Arg	Ser	Arg	Ser	Arg	155	160	165
Ala	Asn	Val	Leu	Asn	Lys	Val	Glu	Tyr	Ala	Gln	Gln	Arg	Trp	Lys	170	175	180
Leu	Gln	Val	Gln	Glu	Gln	Arg	Lys	Ser	Val	Phe	Asp	Arg	His	Val	185	190	195
Val Leu Ser																	

<210> 419  
 <211> 681  
 <212> DNA  
 <213> Homo sapiens

<400> 419  
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 gccttctctgt cccgcgggaa gcggcaggag ccgcgccga cacctgaagg 150  
 aaaattgggc cgatttccac ctatgatgca tcatcaccag gcaccctcag 200  
 atggccagac tcctggggct cgtttccaga ggtctcacct tgccgaggca 250  
 tttgcaaagg ccaaaggatc aggtggaggt gctggaggag gaggtagtgg 300  
 aagaggtctg atggggcaga ttattccaat ctacggtttt gggatttttt 350  
 tatatatact gtacattcta tttaaggtaa gtagaatcat cctaatacata 400  
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450  
 aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500

ctgcctcctc ttcattgaggt acttaggata gccattattt cagtttcaca 550  
 taagaatggt tactcaatgt ttaagtgttt tgccccaaaa ttcacaacta 600  
 acaaggcaga actaggactt gaacatggat ctttttggttc ttaatccagt 650  
 gagtgatata attcaatgca ctcccctgcc a 681

<210> 420  
 <211> 128  
 <212> PRT  
 <213> Homo sapiens

<400> 420  
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 Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg  
                     20                    25                    30  
 Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly  
                     35                    40                    45  
 Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly  
                     50                    55                    60  
 Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala  
                     65                    70                    75  
 Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly  
                     80                    85                    90  
 Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe  
                     95                    100                    105  
 Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg  
                     110                    115                    120  
 Ile Ile Leu Ile Ile Leu His Gln  
                     125

<210> 421  
 <211> 1630  
 <212> DNA  
 <213> Homo sapiens

<400> 421  
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 aactcattcct gctgccagtg ttactggatt attccttggg cctgaatgac 150  
 ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200  
 gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250  
 actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300

tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350  
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400  
tgcaagaggg tgaccagggg acctatatct gtgaaatccg cctcaaaggg 450  
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tcaggacggc gcgcaaagga ggagattgta tttcggttact accacaaact 650  
caggatgtct gtggagtact ccagagctg gggccacttc cagaatcgtg 700  
tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750  
ggagtgaggg agtcagatgg aggaaactac acctgcagta tccacctagg 800  
gaacctggtg ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850  
ctcgaacact ggtgaccccg gcagccctga ggccctcgtt cttgggtggt 900  
aatcagttgg tgatcattgt ggggaattgtc tgtgccacaa tcctgctgct 950  
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000  
tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050  
aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattta 1100  
ctccccata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150  
aatcagaggg cacctacatg accatgcacc cagtttggcc ttctctgagg 1200  
tcagatcgga acaactcact tgaaaaaaag tcagggtggg gaatgccaaa 1250  
aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300  
ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatattc 1350  
agactcccg cctcccagct gtccctcctgt ctcatgtttt ggtcaatata 1400  
ctgaagatgg agaatttgga gcctggcaga gagactggac agctctggag 1450  
gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500  
aactggccc tgggaaccag gctgagctga gtggcctcaa acccccgtt 1550  
ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600  
gaatcagaga taaaaaccaa cccaaatcaa 1630

<210> 422

<211> 394

<212> PRT

<213> Homo sapiens



<400> 422

Met	Phe	Cys	Pro	Leu	Lys	Leu	Ile	Leu	Leu	Pro	Val	Leu	Leu	Asp	1	5	10	15
Tyr	Ser	Leu	Gly	Leu	Asn	Asp	Leu	Asn	Val	Ser	Pro	Pro	Glu	Leu	20	25	30	
Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln	35	40	45	
Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser	50	55	60	
Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser	65	70	75	
Asn	Leu	Ser	Val	Pro	Ile	Gly	Arg	Phe	Gln	Asn	Arg	Val	His	Leu	80	85	90	
Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp	95	100	105	
Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	110	115	120	
Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	125	130	135	
Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	140	145	150	
Ile	Gln	Met	Gly	Cys	Val	Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	155	160	165	
Thr	Lys	Val	Glu	Trp	Ile	Phe	Ser	Gly	Arg	Arg	Ala	Lys	Glu	Glu	170	175	180	
Ile	Val	Phe	Arg	Tyr	Tyr	His	Lys	Leu	Arg	Met	Ser	Val	Glu	Tyr	185	190	195	
Ser	Gln	Ser	Trp	Gly	His	Phe	Gln	Asn	Arg	Val	Asn	Leu	Val	Gly	200	205	210	
Asp	Ile	Phe	Arg	Asn	Asp	Gly	Ser	Ile	Met	Leu	Gln	Gly	Val	Arg	215	220	225	
Glu	Ser	Asp	Gly	Gly	Asn	Tyr	Thr	Cys	Ser	Ile	His	Leu	Gly	Asn	230	235	240	
Leu	Val	Phe	Lys	Lys	Thr	Ile	Val	Leu	His	Val	Ser	Pro	Glu	Glu	245	250	255	
Pro	Arg	Thr	Leu	Val	Thr	Pro	Ala	Ala	Leu	Arg	Pro	Leu	Val	Leu	260	265	270	
Gly	Gly	Asn	Gln	Leu	Val	Ile	Ile	Val	Gly	Ile	Val	Cys	Ala	Thr	275	280	285	

Ile	Leu	Leu	Leu	Pro	Val	Leu	Ile	Leu	Ile	Val	Lys	Lys	Thr	Cys	
				290					295					300	
Gly	Asn	Lys	Ser	Ser	Val	Asn	Ser	Thr	Val	Leu	Val	Lys	Asn	Thr	
				305					310					315	
Lys	Lys	Thr	Asn	Pro	Glu	Ile	Lys	Glu	Lys	Pro	Cys	His	Phe	Glu	
				320					325					330	
Arg	Cys	Glu	Gly	Glu	Lys	His	Ile	Tyr	Ser	Pro	Ile	Ile	Val	Arg	
				335					340					345	
Glu	Val	Ile	Glu	Glu	Glu	Glu	Pro	Ser	Glu	Lys	Ser	Glu	Ala	Thr	
				350					355					360	
Tyr	Met	Thr	Met	His	Pro	Val	Trp	Pro	Ser	Leu	Arg	Ser	Asp	Arg	
				365					370					375	
Asn	Asn	Ser	Leu	Glu	Lys	Lys	Ser	Gly	Gly	Gly	Met	Pro	Lys	Thr	
				380					385					390	

Gln Gln Ala Phe

<210> 423  
 <211> 963  
 <212> DNA  
 <213> Homo sapiens

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 ctatgaagaa gcttcctgga aaacaataag caaaggaaaa caaatgtgtc 50  
 ccatctcaca tgggttctacc ctactaaaga caggaagatc ataaactgac 100  
 agatactgaa attgtaagag ttggaaacta cattttgcaa agtcattgaa 150  
 ctctgagctc agttgcagta ctcgggaagc catgcaggat gaagatggat 200  
 acatcacctt aaatattaaa actcggaaac cagctctcgt ctccgttggc 250  
 cctgcaccc cctcctgggtg gcgtgtgatg gctttgattc tgctgaccc 300  
 gtgcgtgggg atggttgtcg ggctgggtggc tctggggatt tggctctgtca 350  
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgcac aggaactctg 400  
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450  
 aaagggcact ttcaaaggtc ataaatgcag cccctgtgac acaaactgga 500  
 gatattatgg agatagctgc tatgggttct tcaggcacia cttaacatgg 550  
 gaagagagta agcagtactg cactgacatg aatgctactc tcctgaagat 600  
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650  
 gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtgggag 700

gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750  
aggaaatatg aattgtgctt attttcataa tgggaaaatg caccctacct 800  
tctgtgagaa caaacattat ttaatgtgtg agaggaagggc tggcatgacc 850  
aaggtggacc aactacctta atgcaaagag gtggacagga taacacagat 900  
aagggcttta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950  
aaaaaaaaaa aaa 963

<210> 424  
<211> 229  
<212> PRT  
<213> Homo sapiens

<400> 424  
Met Gln Asp Glu Asp Gly Tyr Ile Thr Leu Asn Ile Lys Thr Arg  
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Lys Pro Ala Leu Val Ser Val Gly Pro Ala Ser Ser Ser Trp Trp  
20 25 30  
Arg Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val  
35 40 45  
Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn  
50 55 60  
Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln  
65 70 75  
Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu  
80 85 90  
Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn  
95 100 105  
Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn  
110 115 120  
Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala  
125 130 135  
Thr Leu Leu Lys Ile Asp Asn Arg Asn Ile Val Glu Tyr Ile Lys  
140 145 150  
Ala Arg Thr His Leu Ile Arg Trp Val Gly Leu Ser Arg Gln Lys  
155 160 165  
Ser Asn Glu Val Trp Lys Trp Glu Asp Gly Ser Val Ile Ser Glu  
170 175 180  
Asn Met Phe Glu Phe Leu Glu Asp Gly Lys Gly Asn Met Asn Cys  
185 190 195  
Ala Tyr Phe His Asn Gly Lys Met His Pro Thr Phe Cys Glu Asn

	200	205	210
Lys His Tyr Leu Met Cys Glu Arg Lys	Ala Gly Met Thr Lys	Val	
215	220	225	

Asp Gln Leu Pro

<210> 425  
 <211> 24  
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<220>  
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<400> 425  
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<210> 426  
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 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 426  
 ctgagataac cgagccatcc tcccac 26

<210> 427  
 <211> 49  
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<220>  
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<400> 427  
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428  
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 <212> DNA  
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<220>  
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<400> 428  
 ccaccaatgg cagccccacc t 21

<210> 429  
 <211> 17  
 <212> DNA  
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<220>

<223> Synthetic oligonucleotide probe

<400> 429  
gactgccctc cctgcca 17

<210> 430  
<211> 24  
<212> DNA  
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<220>  
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<400> 430  
caaaaagcct ggaagtcttc aaag 24

<210> 431  
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<220>  
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<400> 431  
cagct\_gact gcaggtgcta 20

<210> 432  
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<400> 432  
cagtgagcac agcaagtgtc ct 22

<210> 433  
<211> 28  
<212> DNA  
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<220>  
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<400> 433  
ggccacctcc ttgagtcttc agttccct 28

<210> 434  
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<212> DNA  
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<220>  
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<400> 434

caactactgg ctaaagctgg tgaa 24

<210> 435  
 <211> 27  
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<220>  
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<400> 435  
 cctttctgta taggtgatac ccaatga 27

<210> 436  
 <211> 24  
 <212> DNA  
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<220>  
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<400> 436  
 tggccatccc taccagaggc aaaa 24

<210> 437  
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<220>  
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<400> 437  
 ctgaagacga cgcggattac ta 22

<210> 438  
 <211> 19  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 438  
 ggcagaaatg ggaggcaga 19

<210> 439  
 <211> 30  
 <212> DNA  
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<220>  
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<400> 439  
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<210> 440

<211> 22  
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 <400> 440  
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 <210> 441  
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 <400> 449  
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 <210> 450  
 <211> 19  
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<400> 450  
 tgcgtacgtg tgccttcag 19  
  
 <210> 451  
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 <210> 452  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <400> 452  
 aacgtgctac acgaccagtg tact 24  
  
 <210> 453  
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 <400> 453  
 cacagcatat tcagatgact aaatcca 27  
  
 <210> 454  
 <211> 31  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 454  
 ttgttttagtt ctccaccgtg tctccacaga a 31  
  
 <210> 455  
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 <220>  
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 <400> 455  
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<210> 456  
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 <210> 457  
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 <210> 459  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <210> 460  
 <211> 24  
 <212> DNA  
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 <210> 461  
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 <400> 461  
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 <210> 462  
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 aagttgctaa atatatacat tatctgcgcc aagtcca 37  
 <210> 464  
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<400> 466  
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<210> 467  
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<400> 467  
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<210> 468  
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<400> 468  
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<210> 470  
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<400> 470  
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<210> 471  
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<210> 472  
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<400> 476  
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<210> 477

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 <210> 482  
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 <210> 483  
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 <400> 483  
 actctccccc tcaacagcct cctgag 26  
  
 <210> 484  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 484  
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 <210> 485  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 485  
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 <210> 486  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <400> 486  
 agcggcgctc ccagcctgaa t 21  
  
 <210> 487  
 <211> 23  
 <212> DNA  
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<400> 487  
 catgattggt cctcagttcc atc 23

<210> 488  
 <211> 20  
 <212> DNA  
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<220>  
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<400> 488  
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<210> 489  
 <211> 21  
 <212> DNA  
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<400> 489  
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<210> 490  
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<220>  
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<400> 490  
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<210> 491  
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 <212> DNA  
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<220>  
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<400> 491  
 ggggccctga cagtgtt 17

<210> 492  
 <211> 26  
 <212> DNA  
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<220>  
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<400> 492  
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<210> 493  
 <211> 17  
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<220>  
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<400> 493  
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<210> 494  
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<400> 494  
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 ccgcgatccc ggccccggggc tgtggcgtcg actccgaccc aggcagccag 100  
 cagcccgcgc gggagccgga ccgccgccgg aggagctcgg acggcatgct 150  
 gagccccctc ctttctgtaa gcccagatgc ggagaagccc gggcaaacgc 200  
 aggctaagga gaccaaagcg gcgaagtcgc gagacagcgg acaagcagcg 250  
 gaggagaagg aggaggaggc gaaccacagag aggggcagca aaagaagcgg 300  
 tggtggtggg cgtcgtggcc atggcggcgg ctatcgccag ctgctcatc 350  
 cgtcagaaga ggcaagcccg cgagcgcgag aaatccaacg cctgcaagtg 400  
 tgtcagcagc cccagcaaag gcaagaccag ctgcgacaaa aacaagttaa 450  
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 agaccagagc ctacagcttaa gggatatagt accaagctat acagccgaca 550  
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<210> 495

<211> 245

<212> PRT

<213> Homo Sapien

<400> 495

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Pro	Ser	Lys	Gly	Lys	Thr	Ser	Cys	Asp	Lys	Asn	Lys	Leu	Asn	Val	35	40	45	
Phe	Ser	Arg	Val	Lys	Leu	Phe	Gly	Ser	Lys	Lys	Arg	Arg	Arg	Arg	50	55	60	
Arg	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	Tyr	Ser	65	70	75	
Arg	Gln	Gly	Tyr	His	Leu	Gln	Leu	Gln	Ala	Asp	Gly	Thr	Ile	Asp	80	85	90	
Gly	Thr	Lys	Asp	Glu	Asp	Ser	Thr	Tyr	Thr	Leu	Phe	Asn	Leu	Ile	95	100	105	
Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Gln	Thr	Lys	110	115	120	
Leu	Tyr	Leu	Ala	Met	Asn	Ser	Glu	Gly	Tyr	Leu	Tyr	Thr	Ser	Glu	125	130	135	
Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	Glu	Asn	140	145	150	
Tyr	Tyr	Val	Thr	Tyr	Ser	Ser	Met	Ile	Tyr	Arg	Gln	Gln	Gln	Ser	155	160	165	
Gly	Arg	Gly	Trp	Tyr	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Glu	Ile	Met	170	175	180	
Lys	Gly	Asn	His	Val	Lys	Lys	Asn	Lys	Pro	Ala	Ala	His	Phe	Leu	185	190	195	
Pro	Lys	Pro	Leu	Lys	Val	Ala	Met	Tyr	Lys	Glu	Pro	Ser	Leu	His	200	205	210	
Asp	Leu	Thr	Glu	Phe	Ser	Arg	Ser	Gly	Ser	Gly	Thr	Pro	Thr	Lys	215	220	225	

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His Asn Glu Ser Thr  
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<211> 1471  
<212> DNA  
<213> Homo Sapien

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tggggggatt tcagtgaana aagtggggga tccctccat ttagagtgtg 200  
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<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

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Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile	35	40	45	
Leu	Leu	Ser	Lys	Val	Arg	Leu	Cys	Gly	Gly	Arg	Pro	Ala	Arg	Pro	50	55	60	
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	65	70	75	
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser	80	85	90	
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn	95	100	105	
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys	110	115	120	
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser	125	130	135	
Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe	140	145	150	
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg	155	160	165	
Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln	170	175	180	
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His	185	190	195	

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<210> 498

<211> 744

<212> DNA

<213> Homo Sapien

<400> 498

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<210> 499

<211> 247

<212> PRT

<213> Homo Sapien

<400> 499

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Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg

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Tyr	Cys	Arg	Gln	Gly	Tyr	Tyr	Leu	Gln	Met	His	Pro	Asp	Gly	Ala					
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Leu	Asp	Gly	Thr	Lys	Asp	Asp	Ser	Thr	Asn	Ser	Thr	Leu	Phe	Asn					
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Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Lys					
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Thr	Gly	Leu	Tyr	Ile	Ala	Met	Asn	Gly	Glu	Gly	Tyr	Leu	Tyr	Pro					
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Ser	Glu	Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe					
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Glu	Asn	Tyr	Tyr	Val	Ile	Tyr	Ser	Ser	Met	Leu	Tyr	Arg	Gln	Gln					
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Glu	Ser	Gly	Arg	Ala	Trp	Phe	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Gln					
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Ser	Lys	Ser	Thr	Ser	Ala	Ser	Ala	Ile	Met	Asn	Gly	Gly	Lys	Pro					
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 <213> Homo Sapien

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 <212> PRT  
 <213> Homo Sapien

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Thr	Asn	Thr	Arg	Leu	Leu	Asn	Leu	His	Glu	Asn	Gln	Ile	Gln	Ile					
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Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser	
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<211> 2458

<212> DNA

<213> Homo Sapien

<400> 502

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<210> 503  
 <211> 373

<212> PRT  
 <213> Homo Sapien

<400> 503

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Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn	Asn	Leu	65	70	75	
Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn	Phe	Leu	80	85	90	
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Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg	Tyr	Val	110	115	120	
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Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp	Leu	Thr	140	145	150	
Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val	Tyr	Tyr	155	160	165	
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Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr	Ala	200	205	210	
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Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly	230	235	240	
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu	245	250	255	
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro	260	265	270	

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Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly	
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Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro	
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Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro	
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<210> 504

<211> 3060

<212> DNA

<213> Homo Sapien

<400> 504

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 <211> 352  
 <212> PRT  
 <213> Homo Sapien

<400> 505  
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 Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu  
 35 40 45  
 Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser  
 50 55 60  
 Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser  
 65 70 75  
 Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg  
 80 85 90



Val	His	Phe	Thr	Ser	Asn	Asp	Leu	Lys	Ser	Gly	Asp	Ala	Ser	Ile	
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Asn	Val	Thr	Asn	Leu	Gln	Leu	Ser	Asp	Ile	Gly	Thr	Tyr	Gln	Cys	
				110					115					120	
Lys	Val	Lys	Lys	Ala	Pro	Gly	Val	Ala	Asn	Lys	Lys	Ile	His	Leu	
				125					130					135	
Val	Val	Leu	Val	Lys	Pro	Ser	Gly	Ala	Arg	Cys	Tyr	Val	Asp	Gly	
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Ser	Glu	Glu	Ile	Gly	Ser	Asp	Phe	Lys	Ile	Lys	Cys	Glu	Pro	Lys	
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Glu	Gly	Ser	Leu	Pro	Leu	Gln	Tyr	Glu	Trp	Gln	Lys	Leu	Ser	Asp	
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Ser	Gln	Lys	Met	Pro	Thr	Ser	Trp	Leu	Ala	Glu	Met	Thr	Ser	Ser	
				185					190					195	
Val	Ile	Ser	Val	Lys	Asn	Ala	Ser	Ser	Glu	Tyr	Ser	Gly	Thr	Tyr	
				200					205					210	
Ser	Cys	Thr	Val	Arg	Asn	Arg	Val	Gly	Ser	Asp	Gln	Cys	Leu	Leu	
				215					220					225	
Arg	Leu	Asn	Val	Val	Pro	Pro	Ser	Asn	Lys	Ala	Gly	Leu	Ile	Ala	
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Gly	Ala	Ile	Ile	Gly	Thr	Leu	Leu	Ala	Leu	Ala	Leu	Ile	Gly	Leu	
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Ile	Ile	Phe	Cys	Cys	Arg	Lys	Lys	Arg	Arg	Glu	Glu	Lys	Tyr	Glu	
				260					265					270	
Lys	Glu	Val	His	His	Asp	Ile	Arg	Glu	Asp	Val	Pro	Pro	Pro	Lys	
				275					280					285	
Ser	Arg	Thr	Ser	Thr	Ala	Arg	Ser	Tyr	Ile	Gly	Ser	Asn	His	Ser	
				290					295					300	
Ser	Leu	Gly	Ser	Met	Ser	Pro	Ser	Asn	Met	Glu	Gly	Tyr	Ser	Lys	
				305					310					315	
Thr	Gln	Tyr	Asn	Gln	Val	Pro	Ser	Glu	Asp	Phe	Glu	Arg	Thr	Pro	
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Gln	Ser	Pro	Thr	Leu	Pro	Pro	Ala	Lys	Phe	Lys	Tyr	Pro	Tyr	Lys	
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 <211> 1705  
 <212> DNA  
 <213> Homo Sapien

<400> 506

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 <211> 206  
 <212> PRT  
 <213> Homo Sapien

<400> 507  
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 Val Val Leu Pro Cys Leu Gly Phe Thr Leu Leu Leu Trp Ser Gln  
 35 40 45  
 Val Ser Gly Ala Gln Gly Gln Glu Phe His Phe Gly Pro Cys Gln  
 50 55 60  
 Val Lys Gly Val Val Pro Gln Lys Leu Trp Glu Ala Phe Trp Ala  
 65 70 75  
 Val Lys Asp Thr Met Gln Ala Gln Asp Asn Ile Thr Ser Ala Arg  
 80 85 90  
 Leu Leu Gln Gln Glu Val Leu Gln Asn Val Ser Asp Ala Glu Ser  
 95 100 105  
 Cys Tyr Leu Val His Thr Leu Leu Glu Phe Tyr Leu Lys Thr Val  
 110 115 120  
 Phe Lys Asn His His Asn Arg Thr Val Glu Val Arg Thr Leu Lys  
 125 130 135  
 Ser Phe Ser Thr Leu Ala Asn Asn Phe Val Leu Ile Val Ser Gln  
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 155 160 165  
 Ala His Arg Arg Phe Leu Leu Phe Arg Arg Ala Phe Lys Gln Leu  
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 Asp Val Glu Ala Ala Leu Thr Lys Ala Leu Gly Glu Val Asp Ile  
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200

205

&lt;210&gt; 508

&lt;211&gt; 924

&lt;212&gt; DNA

&lt;213&gt; Homo Sapien

&lt;400&gt; 508

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&lt;210&gt; 509

&lt;211&gt; 177

&lt;212&gt; PRT

&lt;213&gt; Homo Sapien

&lt;400&gt; 509

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Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
          20          25          30

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Arg Ala Ile Gln	Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu	
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Ser Thr Leu Glu	Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys	
	65	70 75
Cys Val Thr Lys	Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe	
	80	85 90
Lys Asp His Gln	Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser	
	95	100 105
Ser Ile Ala Asn	Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln	
	110	115 120
Cys Gln Glu Gln	Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn	
	125	130 135
Ala Thr Arg Val	Ile His Asp Asn Tyr Asp Gln Leu Glu Val His	
	140	145 150
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Trp Ile Asn Lys	Asn His Glu Val Met Phe Ser Ala	
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<210> 510  
 <211> 996  
 <212> DNA  
 <213> Homo Sapien

<400> 510  
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 ccacggcggc acaccggag cgccgaggac gactcggagc gggaccccct 800  
 gaacgtgctg aagccccggg cccggatgac cccggccccg gcctcctgtt 850  
 cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgacca 900  
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<210> 511

<211> 251

<212> PRT

<213> Homo Sapien

<400> 511

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Val	Cys	Ser	Met	Ser	Val	Leu	Arg	Ala	Tyr	Pro	Asn	Ala	Ser	Pro	20	25	30	
Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	35	40	45	
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	50	55	60	
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	65	70	75	
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	80	85	90	
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	95	100	105	
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	110	115	120	
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	125	130	135	
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	140	145	150	
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	155	160	165	
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser				

	170		175		180
Ala Glu Asp Asp Ser Glu Arg Asp Pro Leu Asn Val Leu Lys Pro					
	185		190		195
Arg Ala Arg Met Thr Pro Ala Pro Ala Ser Cys Ser Gln Glu Leu					
	200		205		210
Pro Ser Ala Glu Asp Asn Ser Pro Met Ala Ser Asp Pro Leu Gly					
	215		220		225
Val Val Arg Gly Gly Arg Val Asn Thr His Ala Gly Gly Thr Gly					
	230		235		240
Pro Glu Gly Cys Arg Pro Phe Ala Lys Phe Ile					
	245		250		

<210> 512  
 <211> 2015  
 <212> DNA  
 <213> Homo Sapien

<400> 512  
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 ctgctgggag gttgggggtct ctgggagctc tgcaggcccc agcaccgcga 150  
 gaggcagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200  
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 ggtgtccttg gactcacctt ggcacatgtt ctgtgtttca gtaaagagag 1950  
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<210> 513

<211> 482

<212> PRT

<213> Homo Sapien

<400> 513

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				20					25					30



Arg	Ala	Asp	Thr	Ala	Met	Thr	Thr	Asp	Asp	Thr	Glu	Val	Pro	Ala		35	40	45
Met	Thr	Leu	Ala	Pro	Gly	His	Ala	Ala	Leu	Glu	Thr	Gln	Thr	Leu		50	55	60
Ser	Ala	Glu	Thr	Ser	Ser	Arg	Ala	Ser	Thr	Pro	Ala	Gly	Pro	Ile		65	70	75
Pro	Glu	Ala	Glu	Thr	Arg	Gly	Ala	Lys	Arg	Ile	Ser	Pro	Ala	Arg		80	85	90
Glu	Thr	Arg	Ser	Phe	Thr	Lys	Thr	Ser	Pro	Asn	Phe	Met	Val	Leu		95	100	105
Ile	Ala	Thr	Ser	Val	Glu	Thr	Ser	Ala	Ala	Ser	Gly	Ser	Pro	Glu		110	115	120
Gly	Ala	Gly	Met	Thr	Thr	Val	Gln	Thr	Ile	Thr	Gly	Ser	Asp	Pro		125	130	135
Glu	Glu	Ala	Ile	Phe	Asp	Thr	Leu	Cys	Thr	Asp	Asp	Ser	Ser	Glu		140	145	150
Glu	Ala	Lys	Thr	Leu	Thr	Met	Asp	Ile	Leu	Thr	Leu	Ala	His	Thr		155	160	165
Ser	Thr	Glu	Ala	Lys	Gly	Leu	Ser	Ser	Glu	Ser	Ser	Ala	Ser	Ser		170	175	180
Asp	Gly	Pro	His	Pro	Val	Ile	Thr	Pro	Ser	Arg	Ala	Ser	Glu	Ser		185	190	195
Ser	Ala	Ser	Ser	Asp	Gly	Pro	His	Pro	Val	Ile	Thr	Pro	Ser	Arg		200	205	210
Ala	Ser	Glu	Ser	Ser	Ala	Ser	Ser	Asp	Gly	Pro	His	Pro	Val	Ile		215	220	225
Thr	Pro	Ser	Trp	Ser	Pro	Gly	Ser	Asp	Val	Thr	Leu	Leu	Ala	Glu		230	235	240
Ala	Leu	Val	Thr	Val	Thr	Asn	Ile	Glu	Val	Ile	Asn	Cys	Ser	Ile		245	250	255
Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp		260	265	270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser		275	280	285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile		290	295	300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr		305	310	315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro				

	320		325		330
Thr Asn Ser Ala	Thr Glu Arg Glu Val	Thr Ala Pro Gly Ala Thr			
	335	340		345	
Thr Leu Ser Gly	Ala Leu Val Thr Val	Ser Arg Asn Pro Leu Glu			
	350	355		360	
Glu Thr Ser Ala	Leu Ser Val Glu Thr	Pro Ser Tyr Val Lys Val			
	365	370		375	
Ser Gly Ala Ala	Pro Val Ser Ile Glu	Ala Gly Ser Ala Val Gly			
	380	385		390	
Lys Thr Thr Ser	Phe Ala Gly Ser Ser	Ala Ser Ser Tyr Ser Pro			
	395	400		405	
Ser Glu Ala Ala	Leu Lys Asn Phe Thr	Pro Ser Glu Thr Pro Thr			
	410	415		420	
Met Asp Ile Ala	Thr Lys Gly Pro Phe	Pro Thr Ser Arg Asp Pro			
	425	430		435	
Leu Pro Ser Val	Pro Pro Thr Thr Thr	Asn Ser Ser Arg Gly Thr			
	440	445		450	
Asn Ser Thr Leu	Ala Lys Ile Thr Thr	Ser Ala Lys Thr Thr Met			
	455	460		465	
Lys Pro Gln Gln	Pro Arg Pro Arg Leu	Pro Gly Arg Gly Arg Pro			
	470	475		480	

Gln Thr

<210> 514  
 <211> 2284  
 <212> DNA  
 <213> Homo Sapien

<400> 514  
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 ggcgcggggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150  
 cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200  
 gacaaaaact aaactgaaat ttaaaatggt cttcggggga gaaggagct 250  
 tgacttacac tttggaata atttgcttcc tgacactaag gctgtctgct 300  
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 gtcattctctt tctaaggga tcagaggcaa tgagcccgta tataacttcaa 400  
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aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600  
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<210> 515  
 <211> 431  
 <212> PRT  
 <213> Homo Sapien

<400> 515

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Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu	20	25	30	
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu	35	40	45	
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln	50	55	60	
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly	65	70	75	
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala	80	85	90	
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala	95	100	105	
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile	110	115	120	
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu	125	130	135	
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val	140	145	150	
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp	155	160	165	
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp	170	175	180	

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Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	200	205	210
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	215	220	225
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	230	235	240
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	245	250	255
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	260	265	270
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	275	280	285
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	290	295	300
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	305	310	315
Ser	Leu	Glu	Thr	Ile	Pro	Phe	Thr	Glu	Ile	Ser	Asn	Leu	Thr	Leu	320	325	330
Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	335	340	345
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	350	355	360
Glu	Ala	Ser	Pro	Gly	Ser	Ser	Ser	Gln	Gly	Ser	Val	Pro	Glu	Asn	365	370	375
Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	380	385	390
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	395	400	405
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	410	415	420
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<210> 516  
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 <212> DNA  
 <213> Homo Sapien

<220>  
 <221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

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<211> 332

<212> PRT

<213> Homo Sapien

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				20					25					30	
Asp	Thr	Val	Ser	Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg	Asp	
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His	Arg	Lys	Tyr	Trp	Cys	Arg	Lys	Gly	Gly	Ile	Leu	Phe	Ser	Arg	
				50					55					60	
Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Glu	Gly	Gln	Glu	Thr	Met	
				65					70					75	
Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	
				80					85					90	
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	
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Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	
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Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	
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Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	
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Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	
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Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	
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Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	
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Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	
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Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	
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Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	
				230					235					240	
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu	
				245					250					255	
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	
				260					265					270	



Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln
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Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys
				290					295					300
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro
				305					310					315
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val
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